CDX-11

SERVICE MANUAL

AEP Model

SPECIFICATIONS

System Compact disc digital audio
Laser Diode Properties
Material: GaAlAs
Wavelength: 780 nm
Emission Duration:
Continuous
Laser output power:
Less than 44.6 μW*

* This output is the value measured at a distance of 200 mm from the objective lens surface on the Optical Pick-up Block.

Frequency response
5–20,000 Hz ±3 dB
Harmonic distortion
0.008% (1 kHz)
Dynamic range
90 dB
Signal-to-noise ratio
85 dB
Channel separation
65 dB
Wow and flutter
Below measurable limit
Tone control Bass ±8 dB (100 Hz)
Treble ±8 dB (10 kHz)
Outputs 1 line output

General
Power requirements
12 V DC car battery
(negative ground)
Current drain 800 mA (CD playback)
2 A (during disc loading or eject)
Power consumption
12 W
Operating temperature
−10°C to +50°C
(+15°F to +120°F)
Dimensions Approx. 178 × 50 × 144 mm (w/h/d)
(7 1/8 × 2 × 5 3/4 in.)
including projecting parts and controls
Weight Approx. 1.7 kg (3 lb 12 oz)
Supplied accessory
Mounting hardware (1 set)

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

MICROFILM

COMPACT DISC PLAYER

SONY

Features

- A DIN-sized mobile CD player.
- Simple connection with the power amplifier enables you to play the CD.
- Quick recovery from sound skipping. The player can relocate the point where the play was interrupted.
- Line outputs to connect to an optional casssette car stereo or equalizer.
- Illumination of the controls and disc insertion slot for easy operation even in the dark.

TABLE OF CONTENTS

Section	*Title*	*Page*
1.	**GENERAL**	
1-1.	Precautions	3
1-2.	Fuse Replacement	3
1-3.	Location and Function of Controls	3
1-4.	Installation and Connections	4
2.	**DISASSEMBLY**	
2-1.	Removal	6
3.	**ELECTRICAL ADJUSTMENTS**	
	PLL Free Run Frequency Adjustment	10
	Focus Offset Adjustment	11
	Tracking Offset Adjustment	11
	Tracking Gain Adjustment (rough adjustment)	12
	Focus Gain Adjustment (rough adjustment)	13
4.	**DIAGRAMS**	
4-1.	IC Block Diagrams	13
4-2.	Semiconductor Lead Layouts	15
4-3.	Printed Wiring Boards	16
4-4.	Schematic Diagram	21
5.	**EXPLODED VIEWS**	27
6.	**ELECTRICAL PARTS LIST**	33

NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK OR BASE UNIT

The laser diode in the optical pick-up block may suffer electrostatic breakdown because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body.
During repair, pay attention to electrostatic breakdown and also use the procedure in the printed matter which is included in the repair parts.
The flexible board is easily damaged and should be handled with care.

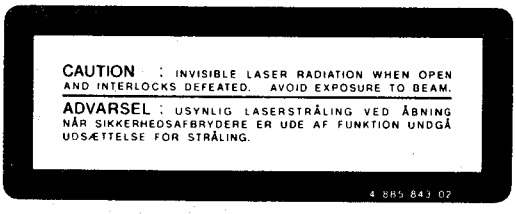
ADVARSEL!!

Under service må øjnene ikke komme nær objektiv-linsen på den optiske pick-up enhed. I tilfælde af at det er nødvendigt at kontrollere udsendelsen af laserlys, skal det ske i en afstand af mere end 25 cm fra den optiske pick-up.

LASER ADVARSEL MÆRKNING

Følgende mærkning findes indvendig i apparatet:

1. Advarsel Mærkning


CAUTION : INVISIBLE LASER RADIATION WHEN OPEN AND INTERLOCKS DEFEATED. AVOID EXPOSURE TO BEAM.
ADVARSEL : USYNLIG LASERSTRÅLING VED ÅBNING NÅR SIKKERHEDSAFBRYDERE ER UDE AF FUNKTION UNDGÅ UDSÆTTELSE FOR STRÅLING.
4 885 843 02

1. Laser-didoe data
   - Materiale: GaAlAs
   - Bølgelængde: 780 nm
   - Udstråling: Kontinuerlig
   - Laseroutput: Max. 0,4 mW*
     * Målt i 1,6 mm afstand fra overfladen af objektivlinsen på den optiske pick-up enhed.
   - Klassifikation: Klasse IIIb.

VAROITUS: Laite sisältää, laserdiodin, joka lähettää (näkymätöntä) silmille vaarallista lasersateilyä.

SECTION 1
GENERAL

1-1. PRECAUTIONS

On operation
- Before operating the unit for the first time or after replacing the battery, press the reset button (see page 8).
- If you insert a disc upside down, the unit will eject the disc.

On handling
- If your car was parked in direct sunlight and there was a considerable rise in temperature inside the car, allow the unit to cool off before operating.
- When transporting the unit, keep the unit horizontal.

On safety
- The nameplate indicating operating voltage, power consumption, etc. is located on the rear.

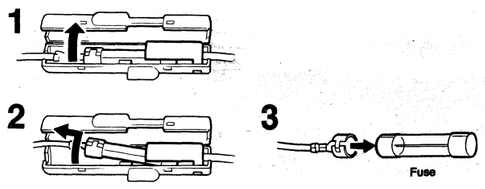
Notes on moisture condensation
On a rainy day or in a very damp area, moisture may condense on the lenses inside the unit. Should this occur, the unit will not operate. In this case, remove the disc and wait for about an hour until the moisture evaporates.

If you have any question or problem concerning the unit that is not covered in this manual, please consult your nearest Sony dealer.

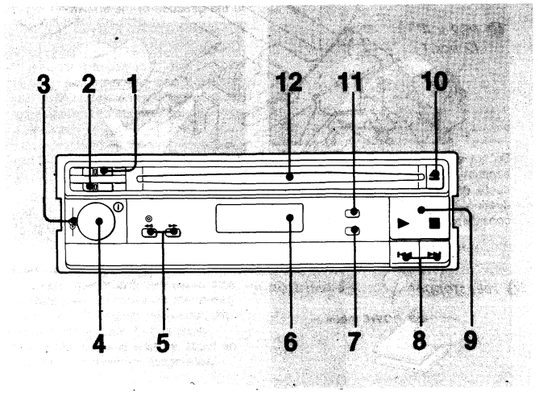
1-2. FUSE REPLACEMENT

If the fuse blows, check the power connection and replace the fuse. If the fuse blows again after replacement, there may be an internal malfunction. In this case, consult your nearest Sony dealer.

Warning
Use of a higher amperage fuse may cause serious damage.



1-3. LOCATION AND FUNCTION OF CONTROLS



1 TRE (treble) control
Slide towards + to increase the treble response, and towards – to decrease it.

2 BAS (bass) control
Slide towards + to increase the bass response and towards – to decrease it.

3 BAL (balance) control
Turn to adjust the balance of the right and left channels.

4 Power switch/VOL (volume) control
Depress to turn on the unit.
Press again to turn off.
Turn clockwise for more volume.

5 ◀◀ ▶▶ MANU (manual search) buttons

6 Display window

7 CLOCK/⌙ button

8 |◀◀ ▶▶| (AMS) buttons

9 ▶ PLAY/■ STOP button and indicator

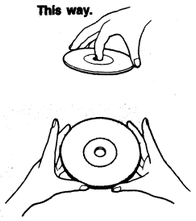
10 ⏏ (eject) button

11 DISPLAY button

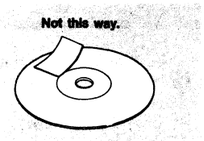
12 Disc insertion slot

Notes on Compact Discs

Handle the disc by its edge, and to keep the disc clean, do not touch the surface.

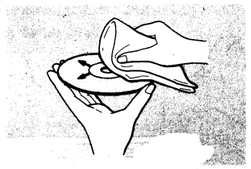


Do not stick paper or tape on the disc surface.



Do not expose the disc to direct sunlight or heat sources such as hot air ducts, or leave it in a car parked in the direct sunlight where there can be a considerable rise in the temperature.

Before playing, clean the disc with an optional cleaning cloth. Wipe the disc in the direction of the arrows.



Do not use solvents such as benzine, thinner, commercially available cleaners or antistatic spray intended for analog discs.

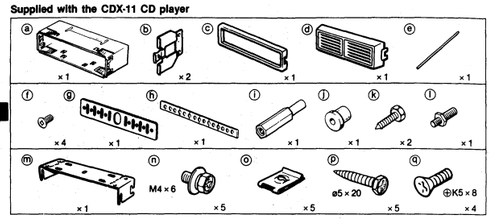
MOUNTING HARDWARE PARTS LIST

No.	Part No.	Description
ⓐ	3-323-219-01	FRAME, FITTING
ⓑ	3-339-403-01	SPRING
ⓒ	3-339-416-01	COLLAR
ⓓ	3-339-417-01	COVER
ⓔ	3-339-460-01	SHAFT, ACCESSORY
ⓕ ⓚ	X-3320-524-1	SCREW ASSY (A)
ⓖ	3-323-217-01	HOLDER, BUSHING
ⓗ	3-310-655-01	SUPPORT (ND), FITTING
ⓘ	3-323-210-01	ADJUSTOR, STUD BOLT
ⓙ	3-323-208-01	BUSHING, RUBBER
ⓛ	3-323-209-01	BOLT (4-5), STUD
ⓜ	3-315-736-21	BRACKET, NEW D
ⓝ ~ ⓠ	X-3322-201-1	SCREW ASSY(50MM), BRACKET

1-4. INSTALLATION AND CONNECTIONS

MOUNTING HARDWARE

Supplied with the CDX-11 CD player



PRECAUTIONS

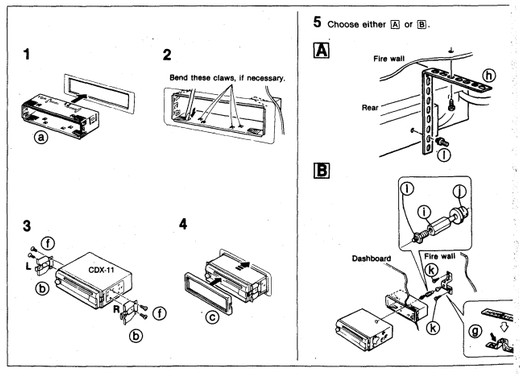
- Choose the mounting location carefully so that the unit will not interfere with the normal driving functions of the driver.
- Avoid installing the unit where it would be subject to high temperatures, such as from direct sunlight or from hot air from the heater, or where it would be subject to dust, dirt or excessive vibration.
- Use only the supplied mounting hardware for safe and secure installation.
- Be careful not to damage wiring or equipment on the other side of the fire wall when you drill holes.

Sony Corporation Printed in Japan ©1988

INSTALLATION EXAMPLES

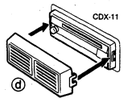
Installation in the dashboard

The parts used: ⓐ, ⓑ, ⓒ, ⓕ, ⓖ, ⓗ, ⓘ, ⓙ, ⓚ and ⓛ.

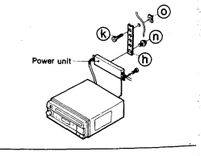


TO LATCH THE PART ⓓ

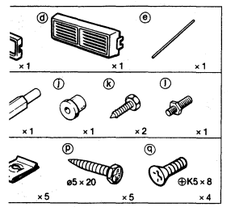
This protects your unit from being stolen. Detach it when operating the unit.



If there is not enough space for installing the unit
Detach the power unit from the main unit as illustrated.



CONNECTIONS



unit will not interfere with the normal

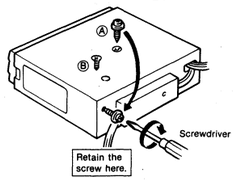
to high temperatures, such as from direct
would be subject to dust, dirt or

and secure installation.
he other side of the fire wall when you

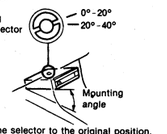
INSTALLATION

BEFORE INSTALLATION

1 Remove the transit screws from the top of the unit.
Retain the screw Ⓐ for future transportation as illustrated.
(You need not retain the screw Ⓑ.)

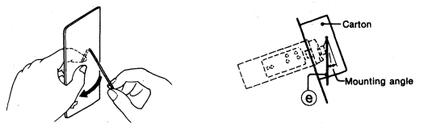


2 Adjust the mounting angle of the CD player according to that of the mounting position to keep the internal anti-shock mechanism in balance.
- If the mounting angle is less than 20° from the horizontal, no adjustment is necessary.
- If it is between 20° and 40°, turn the selector (see illustration) clockwise until it stops.

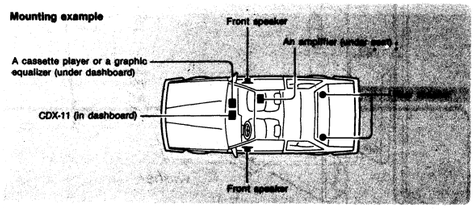


To return the selector to the original position, turn it counterclockwise while pressing it with a screwdriver.

How to measure the angle
Use the supplied stick and the protractor printed on the carton as illustrated.

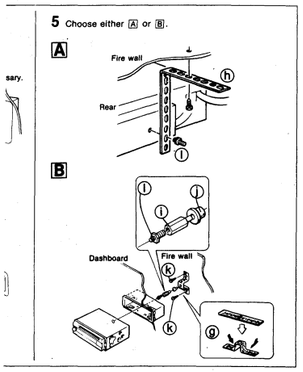


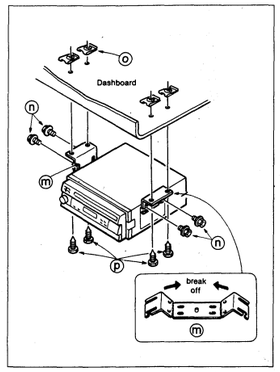
Mounting example


Front speaker
An amplifier (under seat)
A cassette player or a graphic equalizer (under dashboard)
CDX-11 (in dashboard)
Front speaker

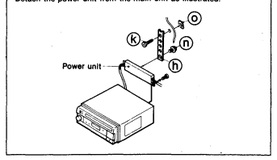
Installation under the dashboard

The parts used: ⓜ, ⓝ, ⓞ and Ⓟ.





If there is not enough space for installing the unit
Detach the power unit from the main unit as illustrated.



1 Mark the locations of the holes on the bottom of the dashboard using part ⓜ as a template.
2 Drill 3 mm (⅛ in.) bolt holes.
3 Secure the pieces of part ⓜ which are broken off to the bottom of the dashboard.*
4 Secure the unit to part ⓜ.

* If the dashboard or the fire wall is thin or made of plastic or a similar material, secure the unit with parts ⓞ and Ⓟ. If it is made of metal plate, ⓞ are not necessary.

Note
Be sure to use the supplied bolts Ⓠ for mounting part ⓜ on the unit. Longer bolts will damage the unit.

CONNECTIONS

CAUTION

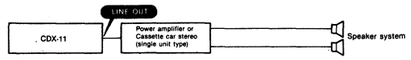
- This unit is designed for negative ground 12 V DC operation only.
- Before making connections, disconnect the ground terminal of the car battery to avoid short circuits.
- Connect the red power input lead only after all other leads are connected. And be sure to connect it to the positive 12 V power terminal. It will be energized when the ignition key is set to the accessory position.
- **Run all ground wires to a common ground point.**
- Be sure to press the reset button after connection is completed.

Memory hold connection
When the yellow power input lead is connected as shown below, power will be always supplied to the memory circuit, even when the ignition key is switched off.

CONNECTION DIAGRAM

According to the unit you have, select the appropriate connection from the following two examples.

Example 1
Connecting to a power amplifier or cassette car stereo system (single unit type)
A detailed diagram of this example is shown below.



Example 2
Connecting to a graphic equalizer

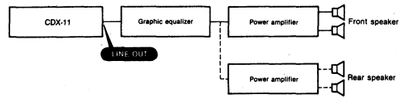
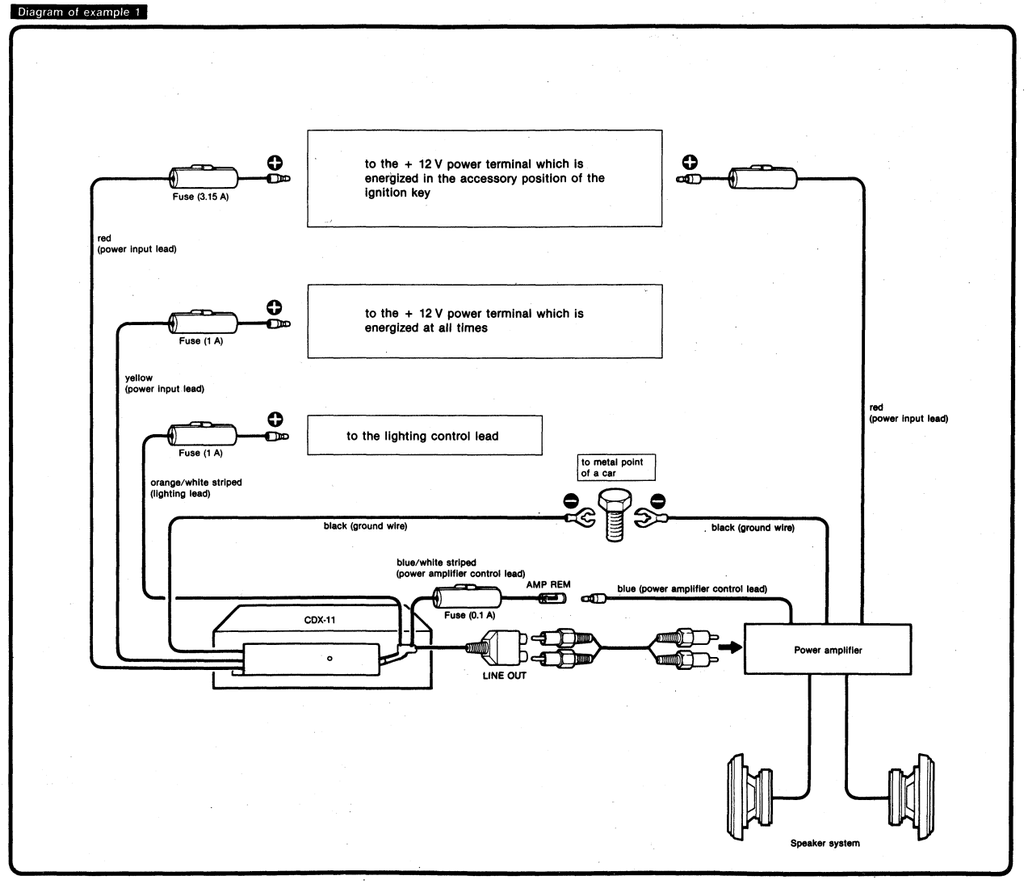


Diagram of example 1



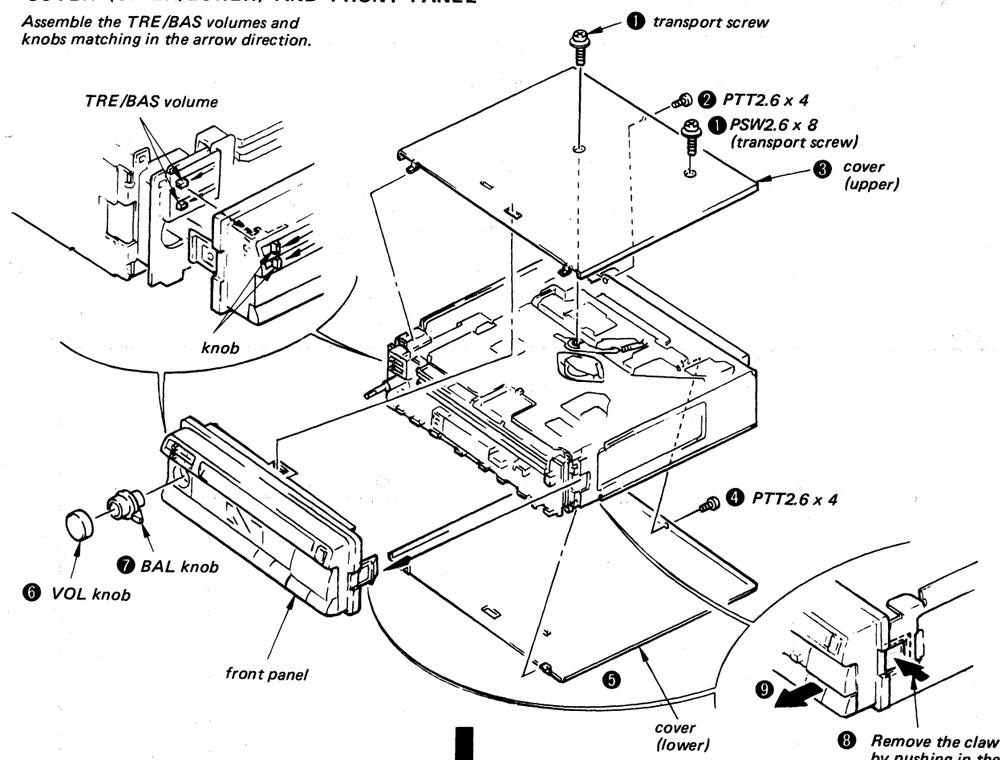
SECTION 2
DISASSEMBLY

2-1. REMOVAL

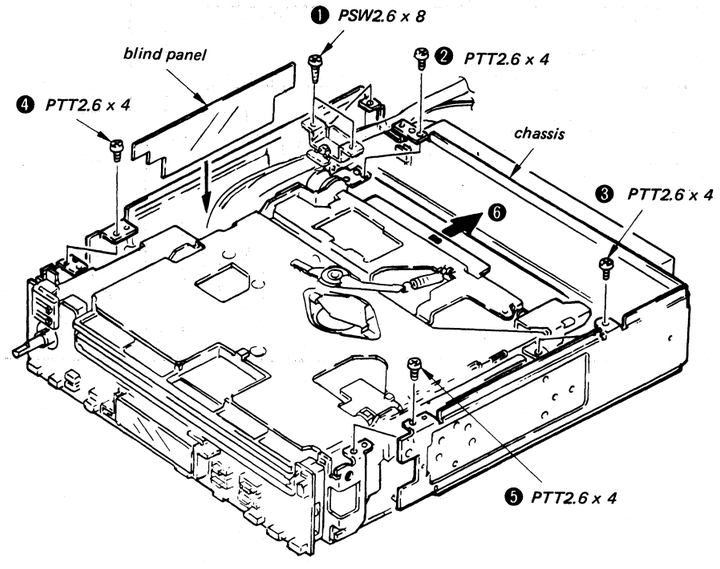
Note: Follow the disassembly procedure in the numerical order given.

COVER (UPPER/LOWER) AND FRONT PANEL

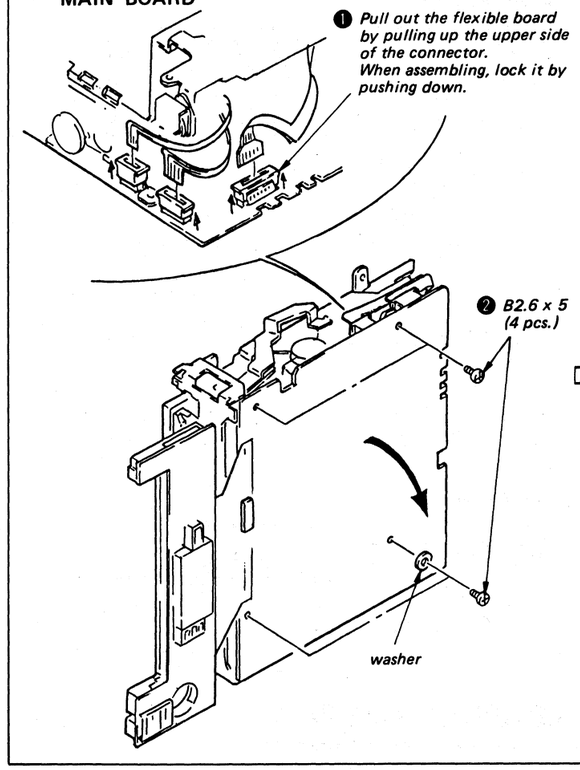
Assemble the TRE/BAS volumes and knobs matching in the arrow direction.

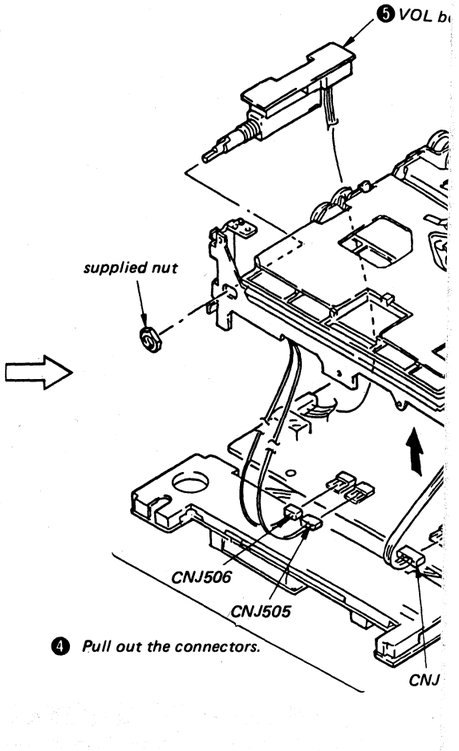


CHASSIS



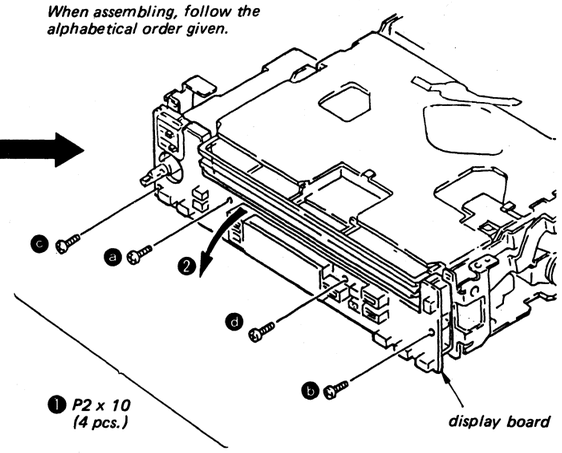
MAIN BOARD


❶ Pull out the flexible board by pulling up the upper side of the connector. When assembling, lock it by pushing down.
❷ B2.6 x 5 (4 pcs.)
washer

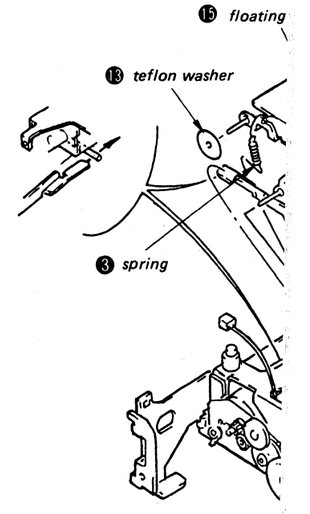


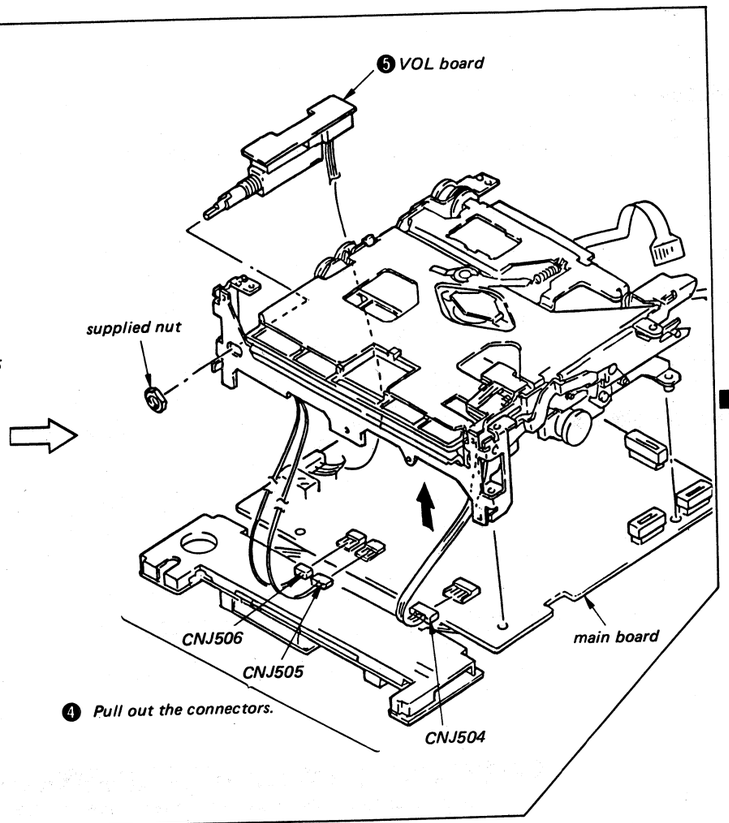
DISPLAY BOARD

When assembling, follow the alphabetical order given.

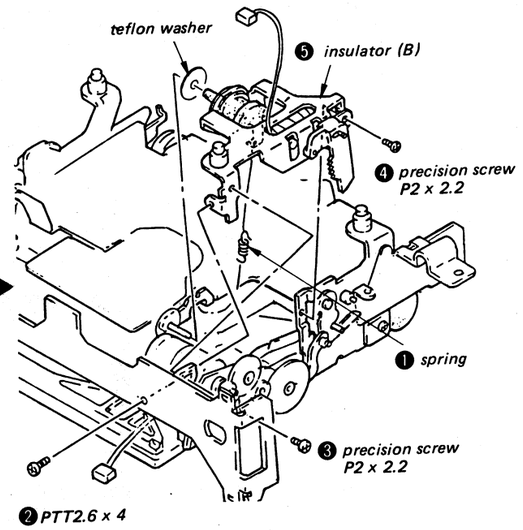


FLOATING MECHANISM

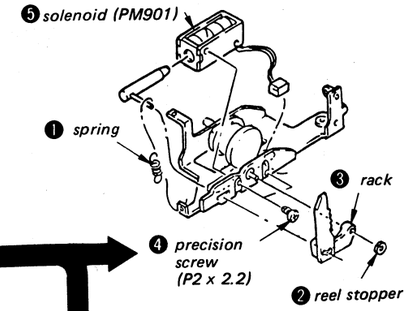




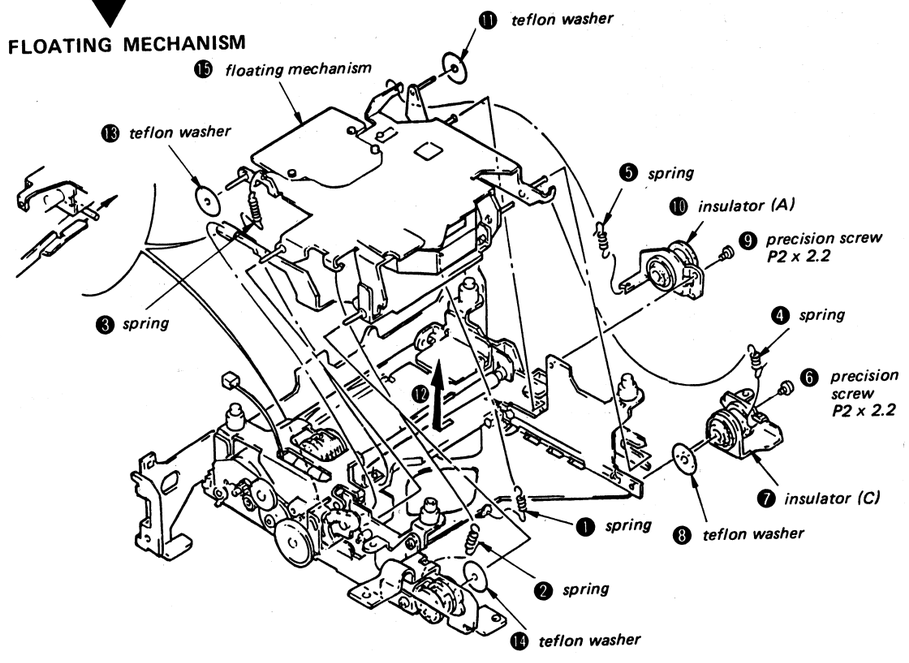
INSULATOR (B)



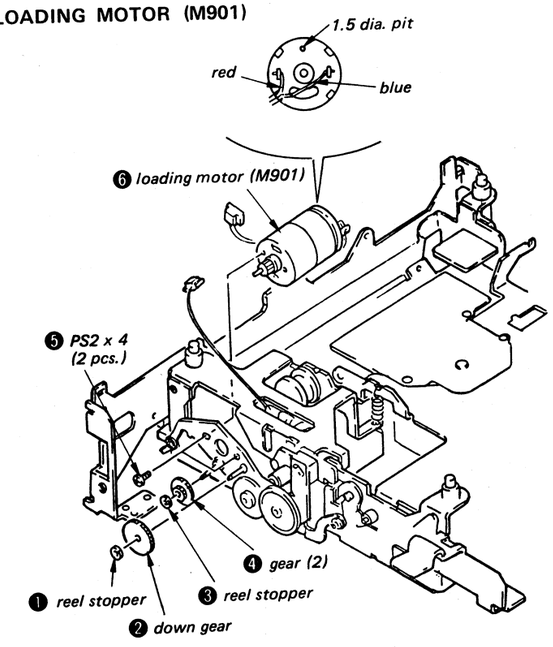
SOLENOID (PM901)



FLOATING MECHANISM

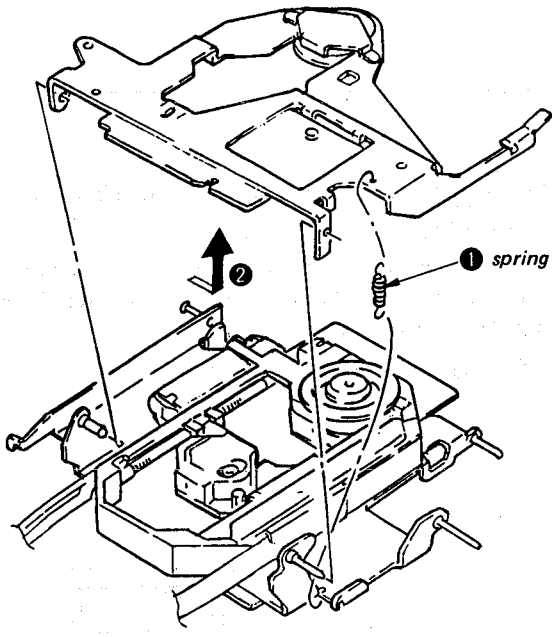


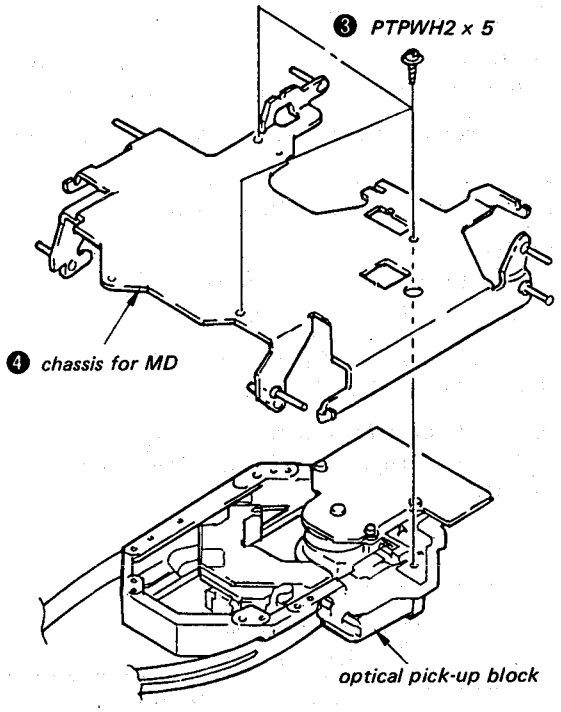
LOADING MOTOR (M901)



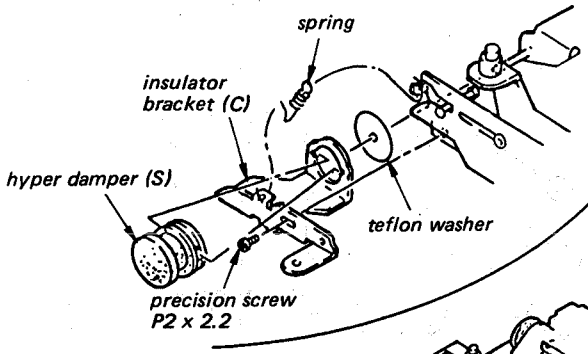
FLOATING MECHANISM
(See page 7.)

OPTICAL PICK-UP BLOCK

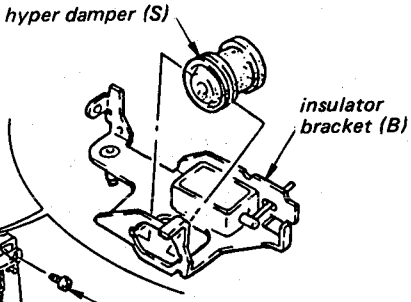




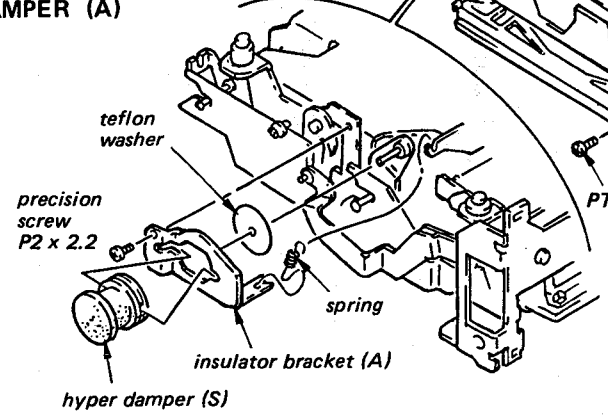
• DAMPER (C)

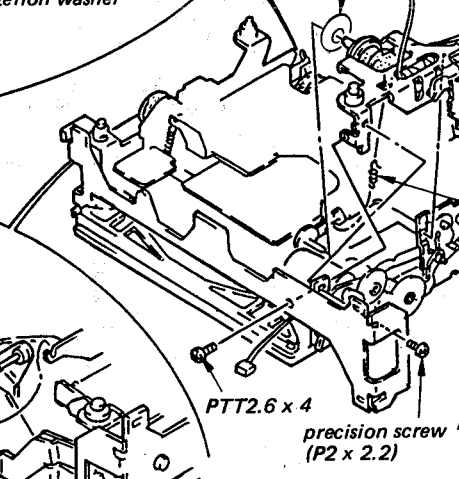


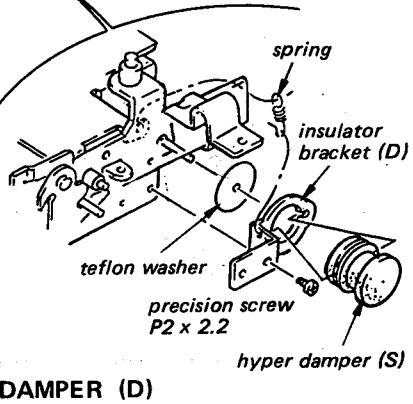
• DAMPER (B)



• DAMPER (A)







• DAMPER (D)

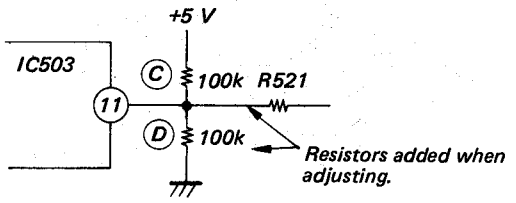
SECTION 3
ELECTRICAL ADJUSTMENTS

1. Perform adjustments as given.
2. Be sure to use the disc "YEDS-18" parts code: 3-702-101-01, but only when indicated.
3. Power supply voltage: DC 14.4 V (more than 2A)

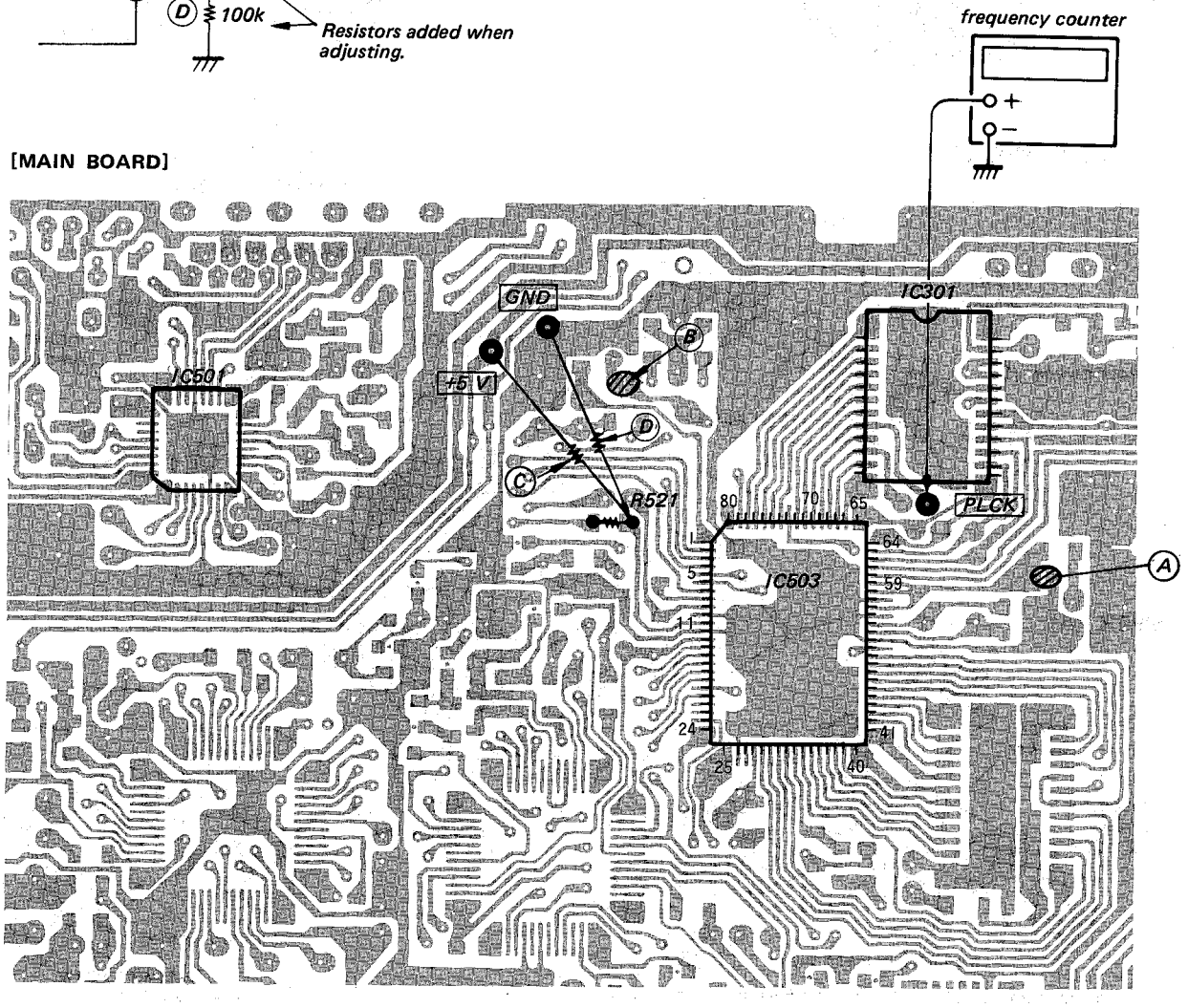
PLL Free Run Frequency Adjustment

Procedure:

1. Solder-bridge the main board point Ⓐ. (IC503 pin ⑤⑨ is grounded)
2. Unsolder main board point Ⓑ. (Disconnect IC503 pin ⑤)
3. Connect 100 kΩ resistors to Ⓒ, Ⓓ. (This is to adjust the IC503 pin ⑪ voltage to 2.5 V)
4. Connect the frequency counter to main board test point PLCK (IC503 pin ⑦⓪).
5. Turn the power switch on (Do not use the disc), then adjust RV505 so that the frequency is 4.3218 MHz ±10 kHz.
6. After adjusting, reset 1, 2 and 3 as original.

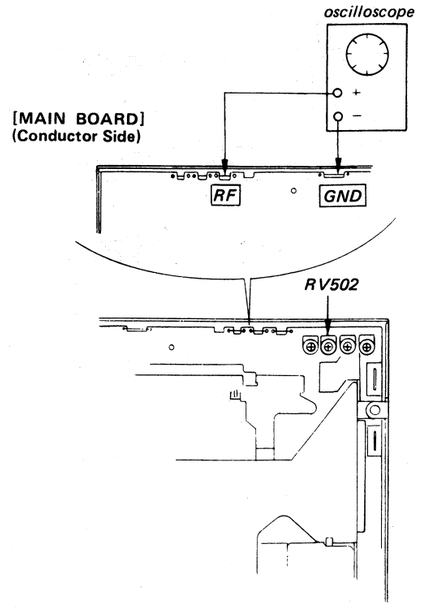


[MAIN BOARD]



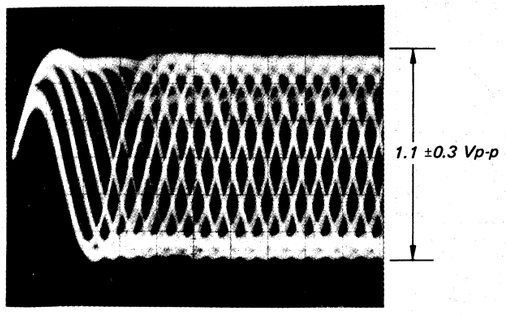
Focus Offset Adjustment

Procedure:



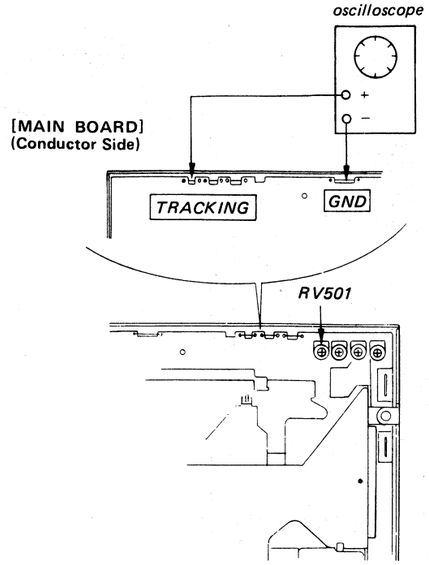
1. Connect the oscilloscope to main board test point RF.
2. Put the set into play mode by loading the disc.
3. Adjust main board RV502 so that the oscilloscope waveform eye pattern is good.
   A good eye pattern means that the diamond shape (◇) in the center of the oscilloscope can be clearly distinguished.

Volt/Div: 200 mV
Time/Div: 0.5 µSec



Tracking Offset Adjustment

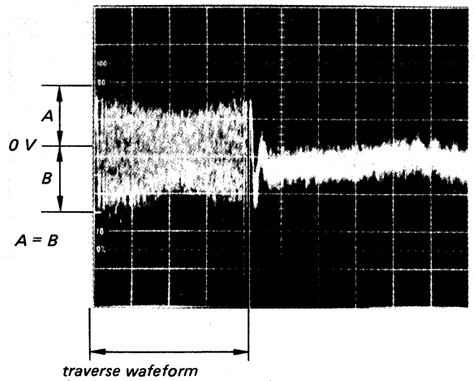
Procedure:



1. Connect the oscilloscope to main board test point TRACKING.
2. Put the set into play mode by loading the disc.
3. Press the |◀◀ or ▶▶| (or ◀◀ , ▶▶) button, then check the traverse waveform*.
4. Adjust RV501 (main board) so that oscilloscope reading is symmetrical in relation to 0 V.

*Traverse waveform: This is the tracking error waveform appears when crossing the track.

Volt/Div: 0.5 V
Time Div: 2 mSec
Center 0 V



traverse wafeform
(100 track jump waveform)

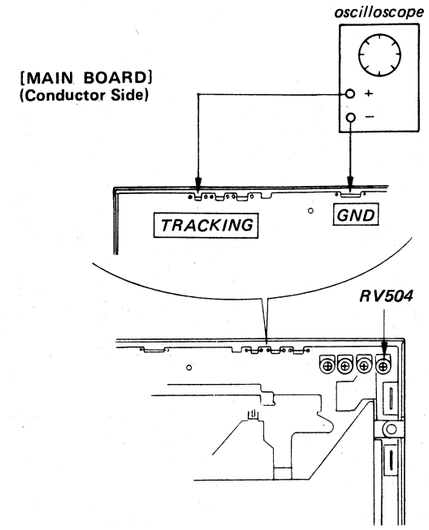
Tracking Gain Adjustment (rough adjustment)

This adjustment is to be performed when replacing the following parts.

- Optical Pick-up Block
- RV504

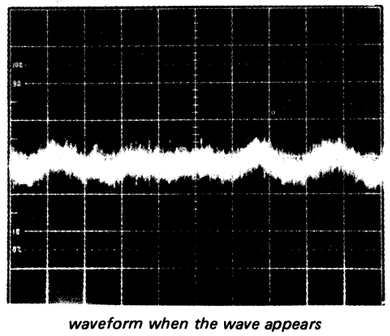
This adjustment should be performed after focus offset and tracking offset adjustment is completed.

Procedure:

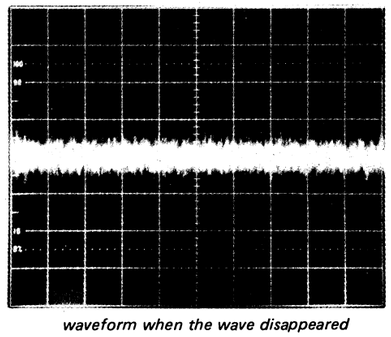


1. Connect the oscilloscope to main board test point TRACKING.
2. Put the set into play mode by loading the disc.
3. Turn main board RV504 counterclockwise, then check the ocilloscope waveform.
   Fix RV504 to the position that the waveform disappears.

Volt/Div: 0.5 V
Time/Div: 2 mSec

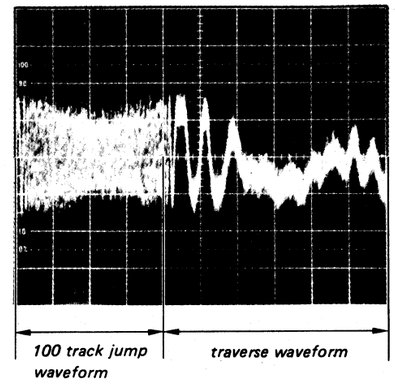


waveform when the wave appears

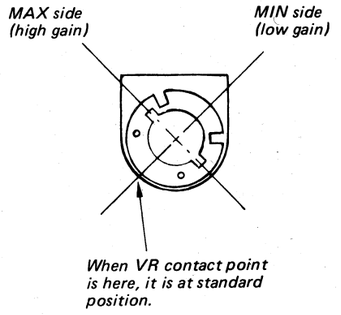


waveform when the wave disappeared

- **When gain is lowered . . .**
  When selecting by pressing |◀◀ or ▶▶| button, brake application is poor because of low tracking gain. Therefore, the traverse waveform appears after the 100 track jump waveform, then the selection will be located slowly.



- **When gain is highered . . .**
  Operation noise is heard due to a scratch or dust, then operation will be instability.



RV503 standard position

t)
replacing

er focus
leted.

scope

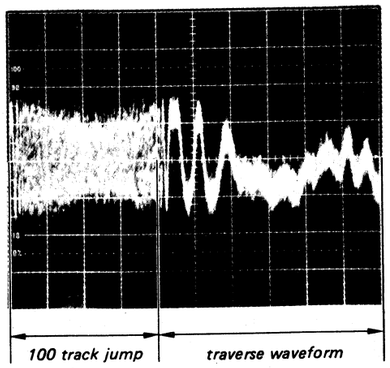
7504

test point

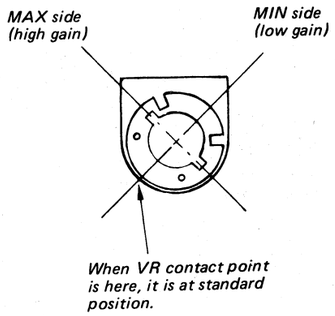
disc.
vise, then

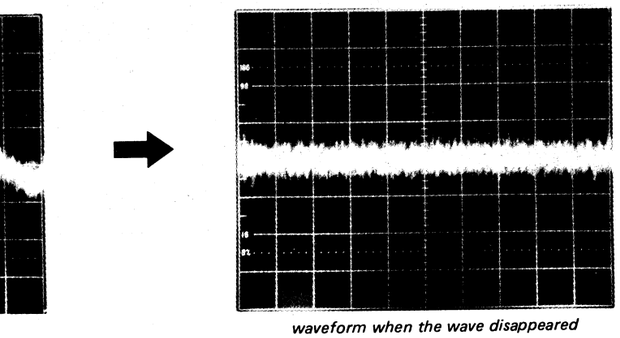
waveform

- **When gain is lowered . . .**
  When selecting by pressing |◀◀ or ▶▶| button, brake application is poor because of low tracking gain. Therefore, the traverse waveform appears after the 100 track jump waveform, then the selection will be located slowly.



- **When gain is highered . . .**
  Operation noise is heard due to a scratch or dust, then operation will be instability.





SECTION 4
DIAGRAM

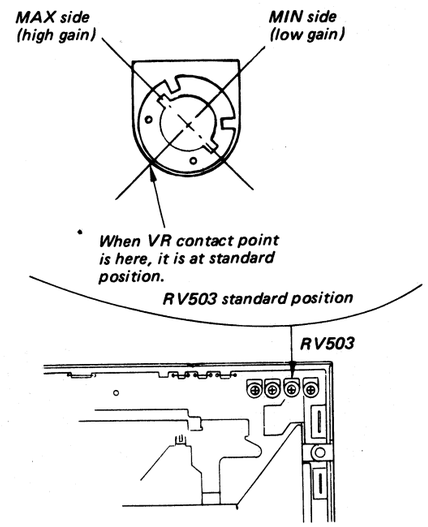
Focus Gain Adjustment (rough adjustment)

This adjustment is to be performed when replacing the following parts.

- Optical Pick-up Block
- RV503

Procedure:

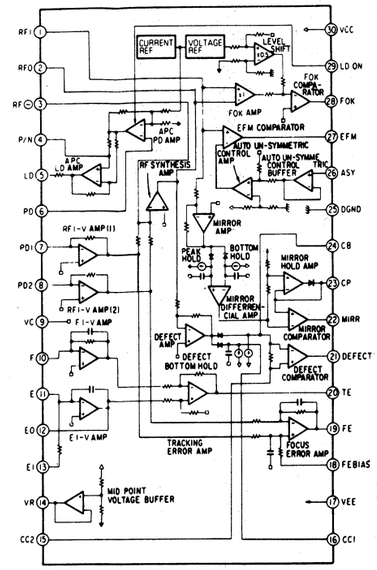
1. Set RV503 (main board) to the standard position.
2. Check that there is not an abnormal amount of operation noise (white noise) from the 2-axis devise. If there is, turn RV503 slightly counter-clockwise.


MAX side (high gain)
MIN side (low gain)
When VR contact point is here, it is at standard position.
RV503 standard position
RV503

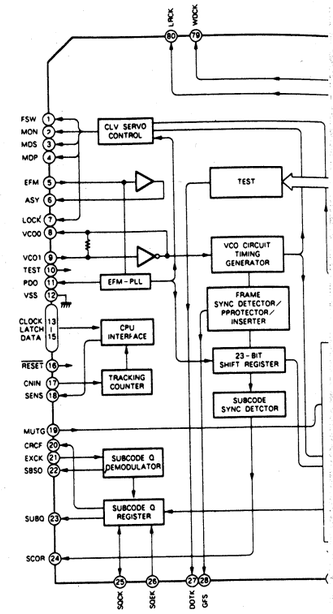
- **When gain is lowered . . .**
  The set does not play because of no focus operation.
- **When gian is highered . . .**
  Operation noise is heard due to a scratch or a dust, then operation will be instability.

4-1. IC BLOCK DIAGRAMS

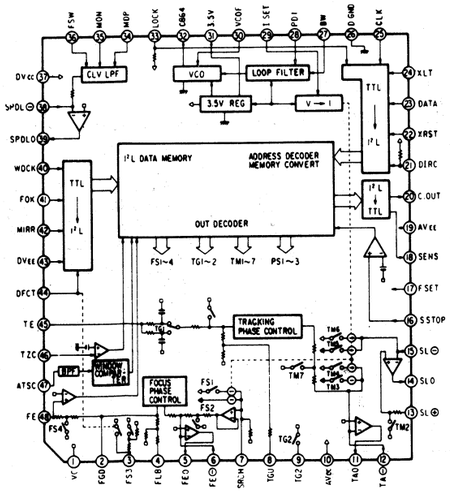
IC501 CXA-1081Q



IC503 CXD1130Q

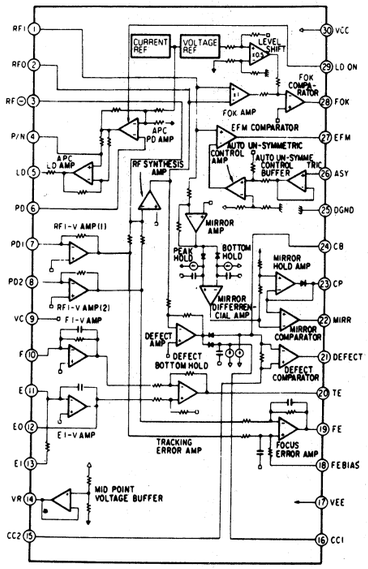


IC502 CXA1082Q

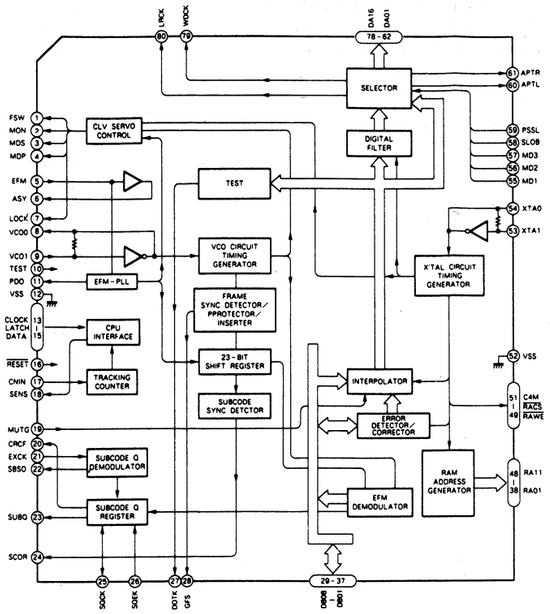


4-1. IC BLOCK DIAGRAMS

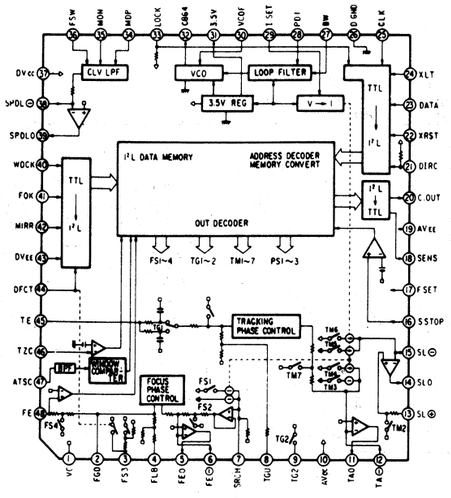
IC501 CXA-1081Q



IC503 CXD1130Q



IC502 CXA1082Q

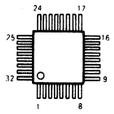


4-2. SEMICONDUCTOR LEAD LAYOUTS

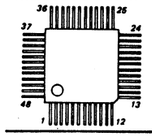
2SA812
2SA1344
2SA1510
2SB1123
2SC2712
2SC3395
2SC3398
2SD1623
DTB113EK
DTB123YK
DTC114EK
DTD113ZK

PN147-LF

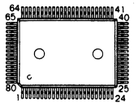
CXA1081Q



CXA1082AQ
MB88505-530M
MB88505-589M



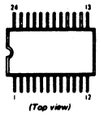
CXD1130Q



MARKING SIDE VIEW

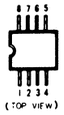
L272M

LC3516AML-15
PCM551-1P-S

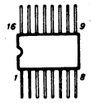


M54940FP

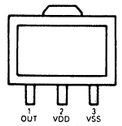
M5203FP
μPC4560G2



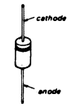
MB88201-534M
TC4053BF



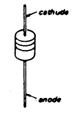
S-8054HN



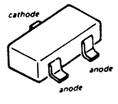
1SS106
10E2
ERB12-04



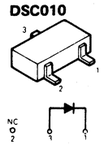
RD5.6ES-B3
RD7.5ES-B2
RD10ES-B2



DSB015

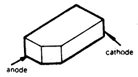


DSC010



DLS1585

LN1451C



4-3. PRINTED WIRING BOARDS

- **See page 15 for Semiconductor Lead Layouts.**

Note on Schematic Diagram:

- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4W or less unless otherwise specified.

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

- Switch

Ref. No.	Switch	Position
S809	⏮	OFF
S810	⏭	OFF
S812	◀◀	OFF
S813	▶▶	OFF
S814	⏏	OFF
S815	PLAY/STOP	OFF
S817	DISPLAY	OFF
S818	REMAIN	OFF
S819	RESET	OFF
S901	SHUTTER DET	OFF
S902	LIMIT	OFF

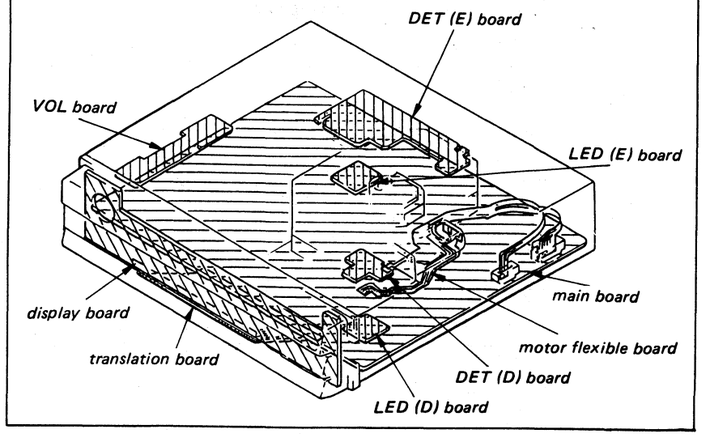
- ▬▬ : B+ Line
- ▬ ▬ ▬ : B− Line
- ▭ : adjustment for repair.

- Power voltage is dc 14.4 V and fed with regulated dc power supply from ACC & BACKUP terminals.
- Voltage and waveforms are dc with respect to ground under no-signal (detuned) conditions.
  no mark : CD playing mode
  LOAD : during disc loading in
  UNLOAD: during disc loading out
- Voltages are taken with a VOM (50 kΩ/V).
  Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope.
  Voltage variations may be noted due to normal production tolerances.
- Signal path.
  ⇨ : CD

Note on Mounting Diagram:

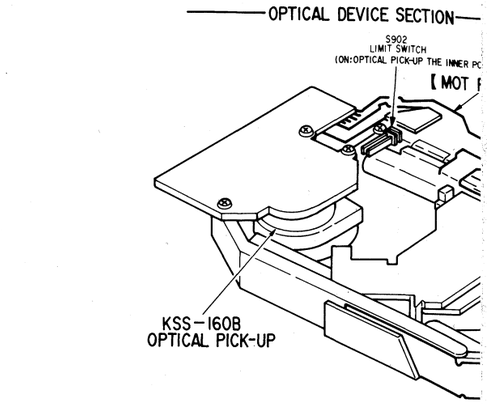
- ○—— : parts extracted from the component side.
- ●—— : parts extracted from the conductor side.
- ■ : parts mounted on the conductor side.
- ⊗ : Through hole.
- ▒▒ : Pattern on the side which is seen.
- ▒▒ : Pattern of the rear side.

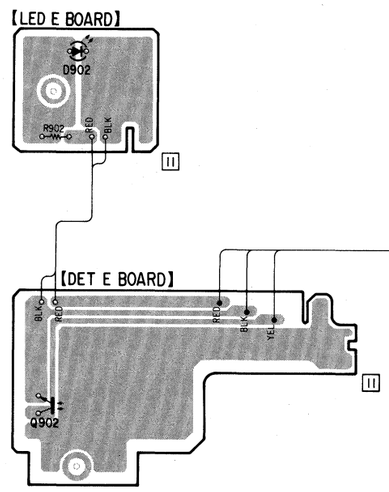
- **CIRCUIT BOARDS LOCATION**

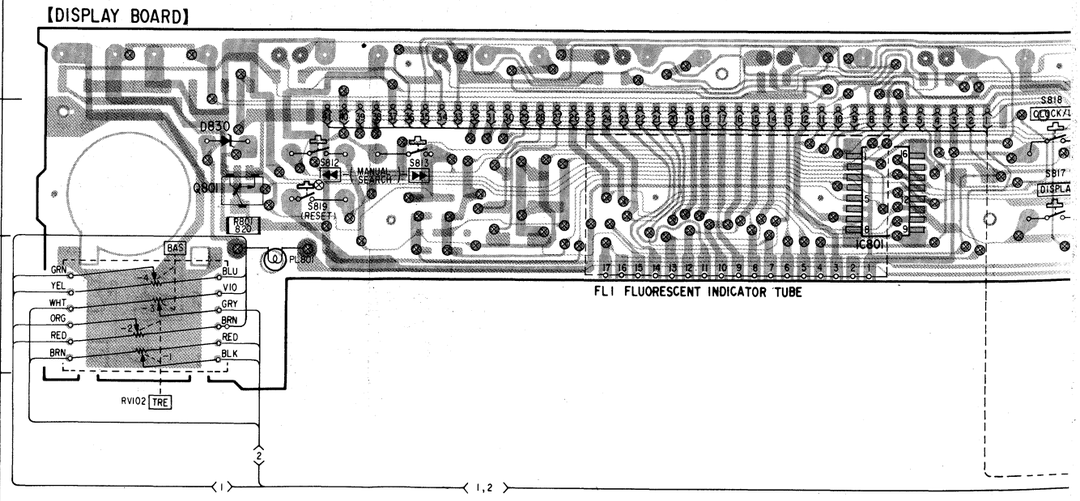


- **Semiconductor Location**

Ref. No.	Location	Ref. No.	Location
D502	H-17	Q501	G-13
D504	I-19	Q502	G-14
D505	H-14	Q503	G-13
D506	I-14	Q504	G-14
D507	J-14	Q505	E-17
D508	I-21	Q506	C-16
D509	G-19	Q507	F-17
D510	I-14	Q508	I-15
D512	J-14	Q509	I-15
D807	I-10	Q510	E-17
D808	I-10	Q511	E-16
D823	H-10	Q514	G-18
D824	H-10	Q515	G-18
D825	J-10	Q516	H-20
D830	I-2	Q517	H-19
D901	F-11	Q518	I-14
D902	D-5	Q519	I-15
IC101	E-22	Q520	H-14
IC102	G-21	Q522	E-23
IC201	D-22	Q523	H-20
IC202	G-22	Q524	I-20
IC301	C-20	Q525	H-20
IC302	D-22	Q526	I-20
IC303	F-21	Q528	I-21
IC304	I-21	Q529	I-21
IC501	D-15	Q530	H-21
IC502	F-15	Q531	I-21
IC503	E-19	Q532	H-21
IC504	F-14	Q533	J-15
IC505	F-17	Q534	I-15
IC506	H-16	Q536	G-19
IC507	F-20	Q537	G-19
IC508	I-17	Q538	G-19
IC512	I-20	Q539	G-19
IC514	H-14	Q540	E-17
IC515	I-14	Q541	E-17
IC516	I-21	Q801	I-2
IC801	I-7	Q901	F-9
		Q902	G-5







6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

OPTICAL DEVICE SECTION

S902
LIMIT SWITCH
(ON:OPTICAL PICK-UP THE INNER POSITION.)

【MOT FLEXIBLE BOARD】

M902
SLED MOTOR

KSS-160B
OPTICAL PICK-UP

SLED MOTOR ⊕
SLED MOTOR ⊖
−5V
+5V
SPINDLE DRIVE
SPINDLE GND
SLED LIMIT
GND

FOCUS ⊕
TRACKING
TRACKING ⊕
FOCUS ⊖

VR PD LD GND E F K GND D C A B

【MAIN BOARD】

【E BOARD】

【DET D BOARD】

【LED D BOARD】

D901
SHUTTER DET
ON:WHEN
SHUTTER IS
CLOSED.

【AMS】

S809 S810 S818 S817 S815 S814

D823 D824 D807 D808 D825

QCLOCK/L
DISPLAY
PLAY/STOP

IC801
INDICATOR TUBE

PL802

PM901
SOLENOID

M901
LOADING
MOTOR

RED
BLU

DC-DC
CONVERTER
UNIT

BLK
GRN
VIO
YEL
WHT
RED
BLU
(CHASSIS)
BUILT IN DC DC CONVERTER
CNJ507

CNJ504
GRN YEL ORG RED BRN

CNJ505
BLU RED

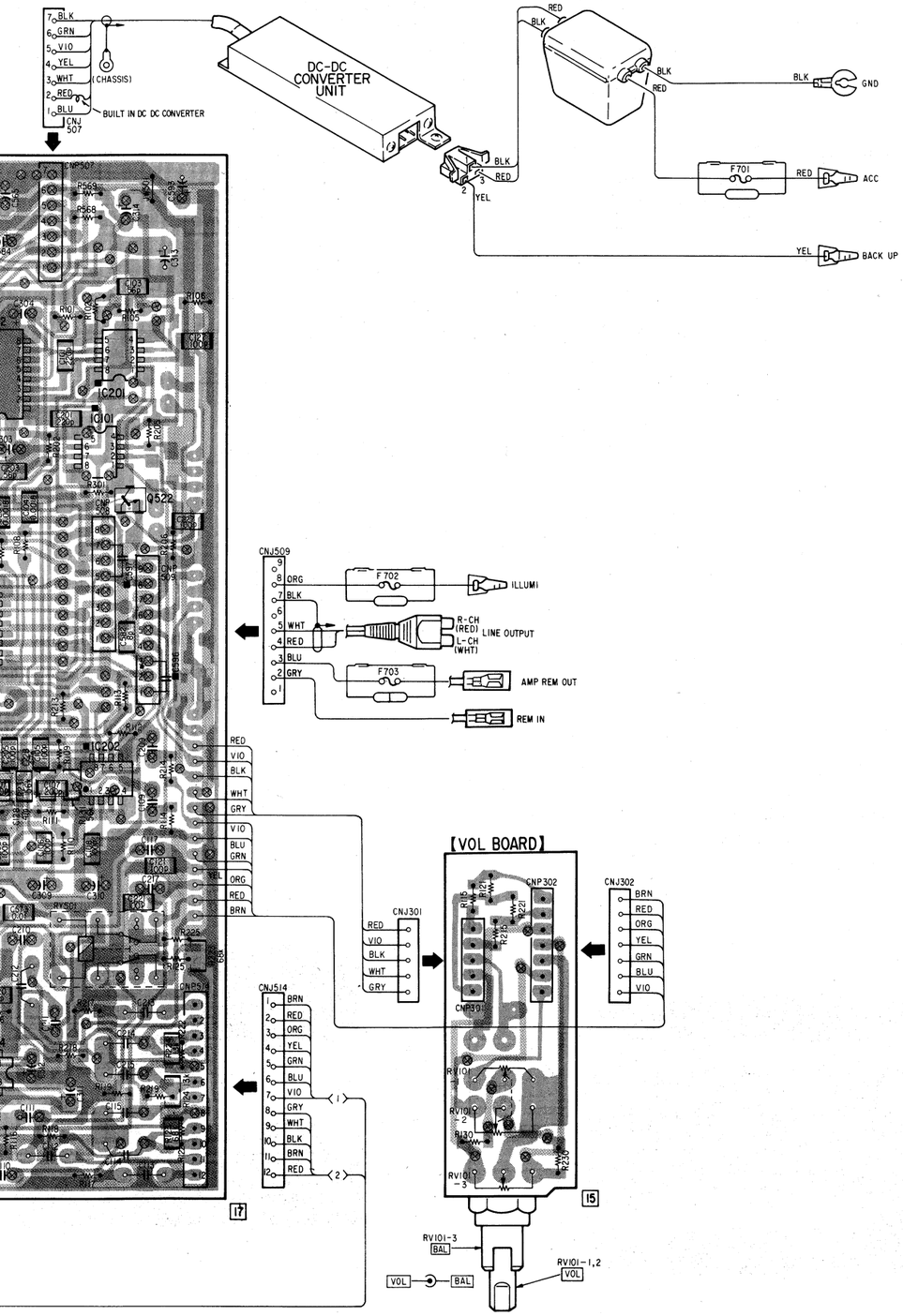
CNJ506
RED RED

CNJ509
BRN ORG BLK WHT RED BLU GRY

CNJ514
BRN RED ORG YEL GRN BLU VIO GRY WHT BLK BRN RED

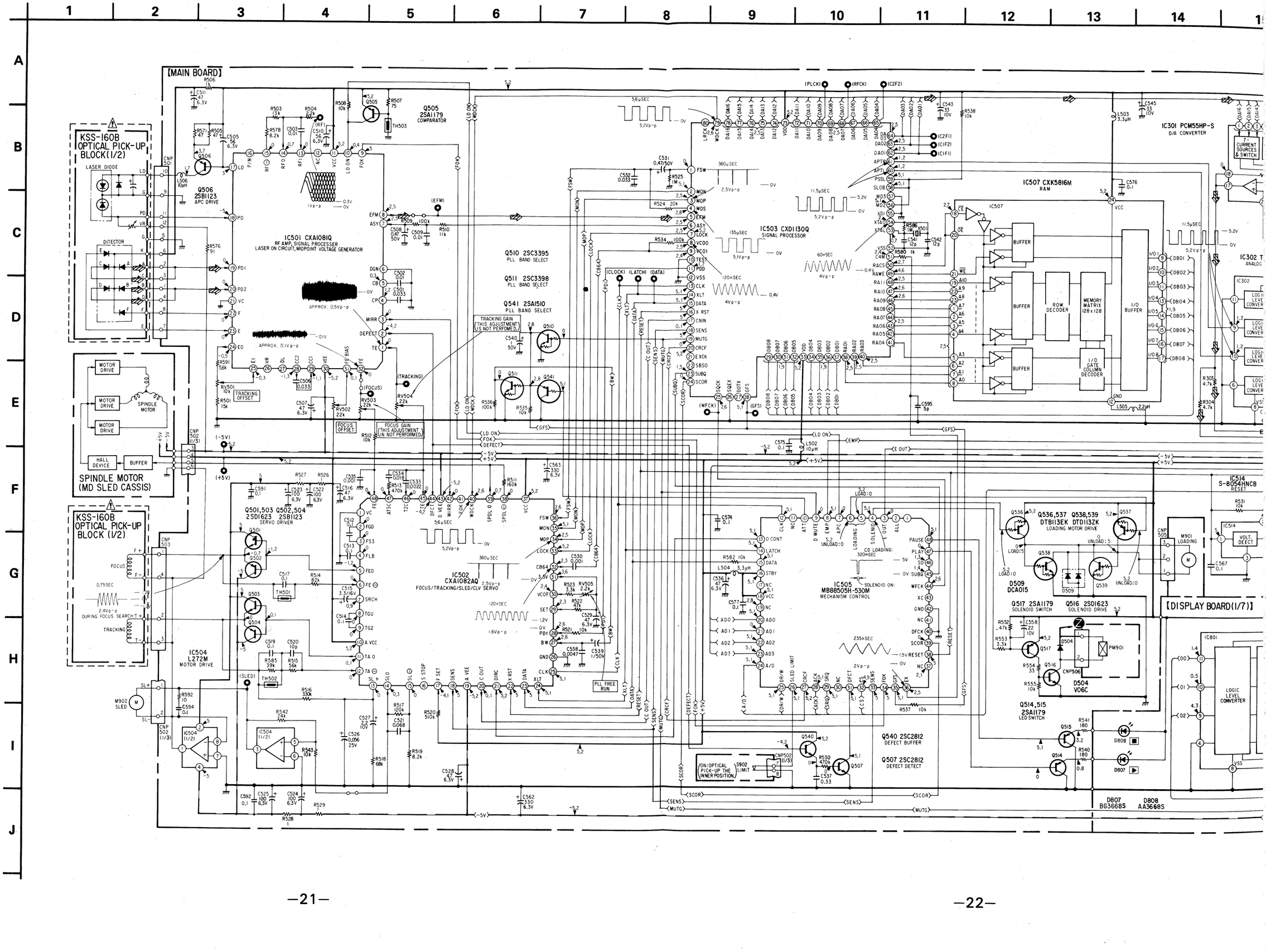
RED VIO BLK WHT GRY VIO BLU GRN YEL ORG RED BRN

1,2 1 — 5


CNJ507
7 BLK
6 GRN
5 VIO
4 YEL
3 WHT (CHASSIS)
2 RED
1 BLU
BUILT IN DC DC CONVERTER
DC-DC CONVERTER UNIT
RED
BLK
BLK
RED
BLK GND
F701
RED ACC
YEL BACK UP
CNJ509
8 ORG
7 BLK
5 WHT
4 RED
3 BLU
2 GRY
F702
ILLUMI
R-CH (RED)
L-CH (WHT)
LINE OUTPUT
F703
AMP REM OUT
REM IN
RED
VIO
BLK
WHT
GRY
VIO
BLU
GRN
ORG
RED
BRN
CNJ301
RED
VIO
BLK
WHT
GRY
【VOL BOARD】
CNP302
CNP303
CNJ302
BRN
RED
ORG
YEL
GRN
BLU
VIO
RV101-1
RV101-2
RV101-3
CNJ514
1 BRN
2 RED
3 ORG
4 YEL
5 GRN
6 BLU
7 VIO
8 GRY
9 WHT
10 BLK
11 BRN
12 RED
(1)
(2)
17
15
RV101-3 BAL
RV101-1,2 VOL
VOL
BAL

4-4. SCHEMATIC DIAGRAM

- See page 16 for notes.
- See page 13 for IC Block Diagrams.



11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27

IC507 CXK5816M RAM

IC301 PCM55HP-S D/A CONVERTER

IC201 M5203FP AMP

IC202 M5203FP AMP

IC304 μPC4560G2 TONE AMP

【VOL BOARD(1/4)】

【DISPLAY BOARD(1/7)】

IC302 TC4053BF ANALOG SWITCH

IC303 TC4053BF ANALOG SWITCH

IC101 M5203FP AMP

IC102 M503FP AMP

IC514 S-8054HNCB RESET

【LED E BOARD】 【DET E BOARD】 【LED D BOARD】 【DET D BOARD】

Q508-509 2SA1344 SENSOR BUFFER

Q536,537 Q538,539 DTB113EK DTD113ZK LOADING MOTOR DRIVE

D509 DCA015

Q517 2SA1179 SOLENOID SWITCH

Q516 2SD1623 SOLENOID DRIVE

D504 V06C

Q514,515 2SA1179 LED SWITCH

D807 BG3668S D808 AA3668S

IC801 TC4051BF KEY MATRIX

D902 TLR123

Q902 PNI47-LF-R DISC SENSOR

Q901 PNI47-LF-R DISC SENSOR

Q522 2SC3395 CD/AUX SELECT

D502 DSC010

IC506 MB88505-502M SYSTEM CONTROL

IC515 S-8054HNCB RESET

IC516 S-8054HNCB MUTE COMPARATOR

D508 DCA015

Q528,529 2SC3398 RELAY DRIVE

Q533 Q534 DTA144WK 2SC3398 COLON SWITCH

IC508 M54940 FLUORESCENT TUBE DRIVE/DECODER

FLI FLUORESCENT INDICATOR TUBE 【DISPLAY BOARD(1/7)】

IC512 MB8820I-534M I/O CONTROL

Q525 DTB123YK REMOTE BUFFER

Q526 2SC2812 REMOTE SWITCH

Q530 2SC3398 REMOTE SWITCH

Q531,532 2SC3398 REMOTE SWITCH

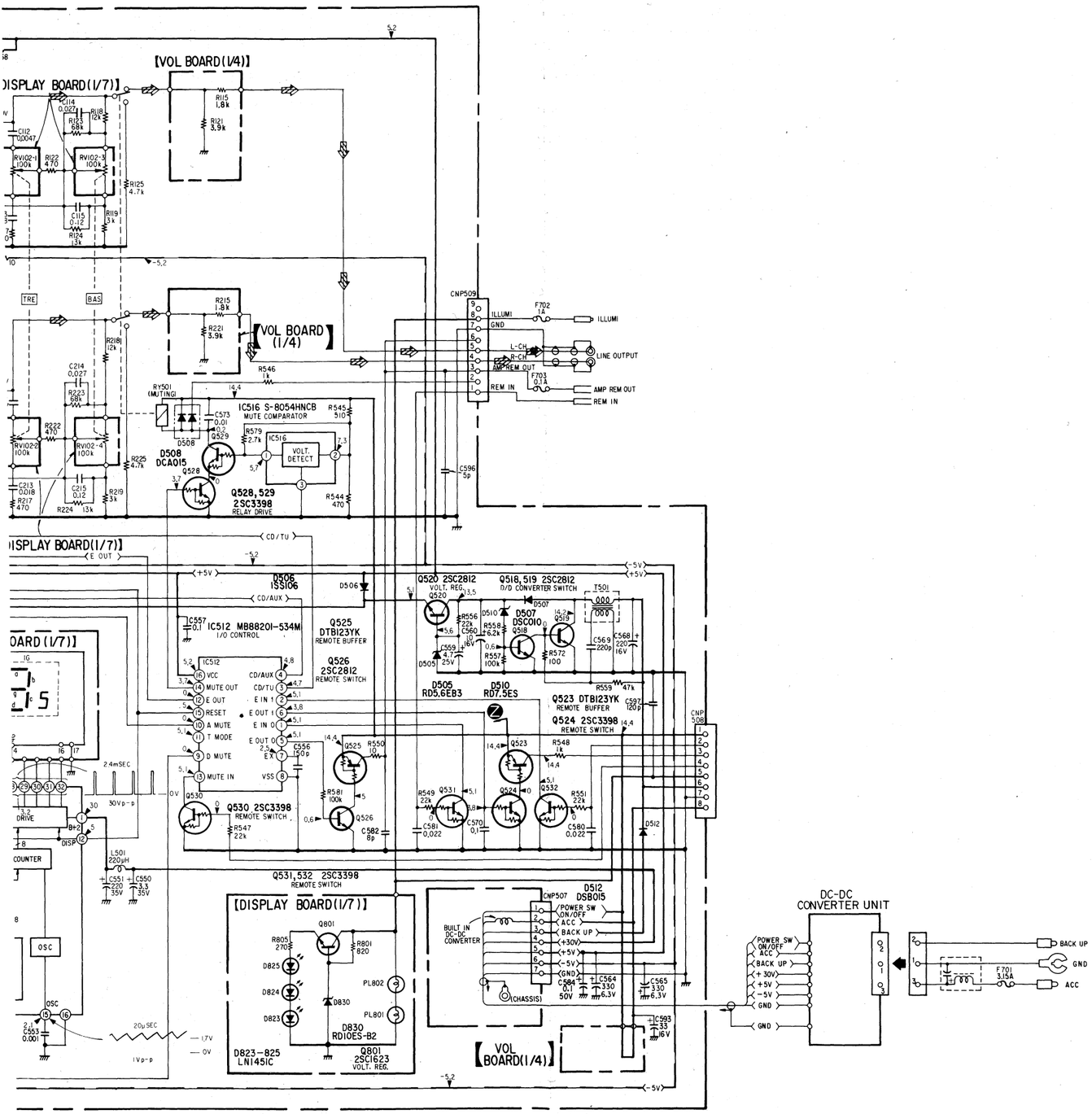
D506 1SS106

D823-825 LN1451C

Q801 2SC1623 VOLT. REG.

25 26 27 28 29 30 31 32 33

A B C D E F G H I J



CDX-11 CDX-11

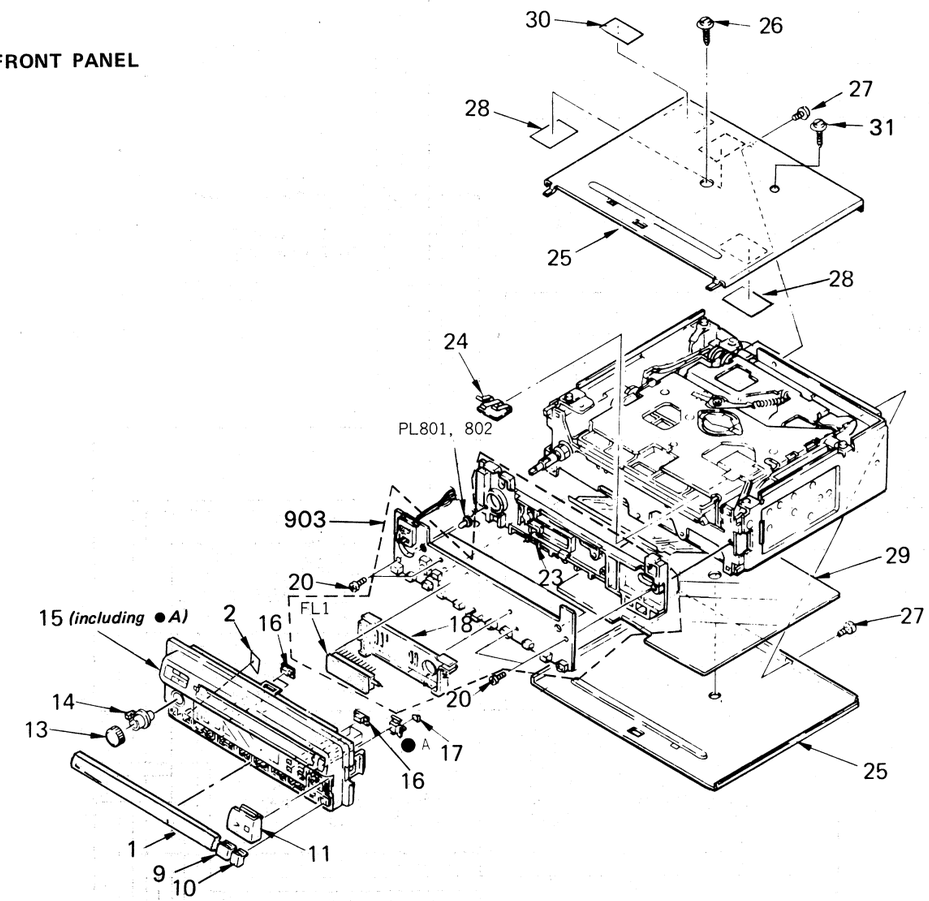
SECTION 5
EXPLODED VIEWS

NOTE:

- The mechanical parts with no reference number in the exploded views are not supplied.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked "★" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Due to standardization, parts with part number suffix -XX and -X may be different from the parts specified in the components used on the set.
- Color Indication of Appearance Parts Example:
  (RED) . . . KNOB, BALANCE (WHITE)
  ↑ Cabinet's Color ↑ Parts Color

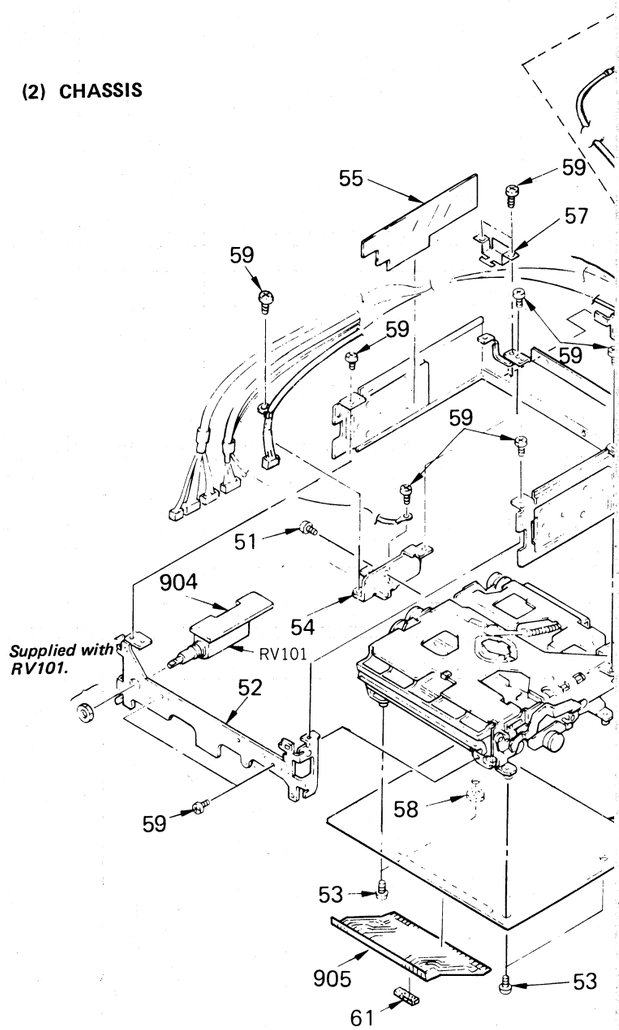
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

(1) FRONT PANEL



No.	Part No.	Description	Remarks
1	3-339-497-01	PANEL, SUB	
2	*3-339-463-01	SHEET, BARREL	
9	3-339-420-51	BUTTON, AMS (D)/BAND	
10	3-339-419-21	BUTTON, AMS	
11	3-339-436-01	BUTTON, PLAY	
13	X-3339-402-1	KNOB ASSY, VOLUME	
14	3-339-401-01	KNOB, FADER	
15	X-3339-412-1	PANEL ASSY, FRONT	
16	3-339-405-01	BUTTON (A)	
17	9-911-844-XX	SPACER (B)	
18	3-339-433-01	HOLDER, FL TUBE	
20	7-621-255-65	SCREW +P 2X10	
23	3-339-439-01	HOLDER, PC BOARD	
24	3-339-450-01	SPRING, GROUND	
25	*3-339-425-12	LID	
26	3-339-408-01	SCREW, TRANSPORT	
27	7-621-773-86	SCREW +PTT 2.6X4 (S)	
28	*3-339-458-01	SHEET, INSULATING, MD	
29	*3-339-407-01	SHEET, INSULATING	
30	*3-345-301-01	LABEL, MODEL NUMBER (EXP)	
31	7-685-793-04	SCREW +PTT 2.6X8 (S)	
903	*A-3216-348-A	INDICATION BLOCK ASSY	
FL1	1-519-324-21	INDICATOR TUBE, FLUORESCENT	
PL801	1-518-615-11	LAMP, PILOT	
PL802	1-518-615-11	LAMP, PILOT	

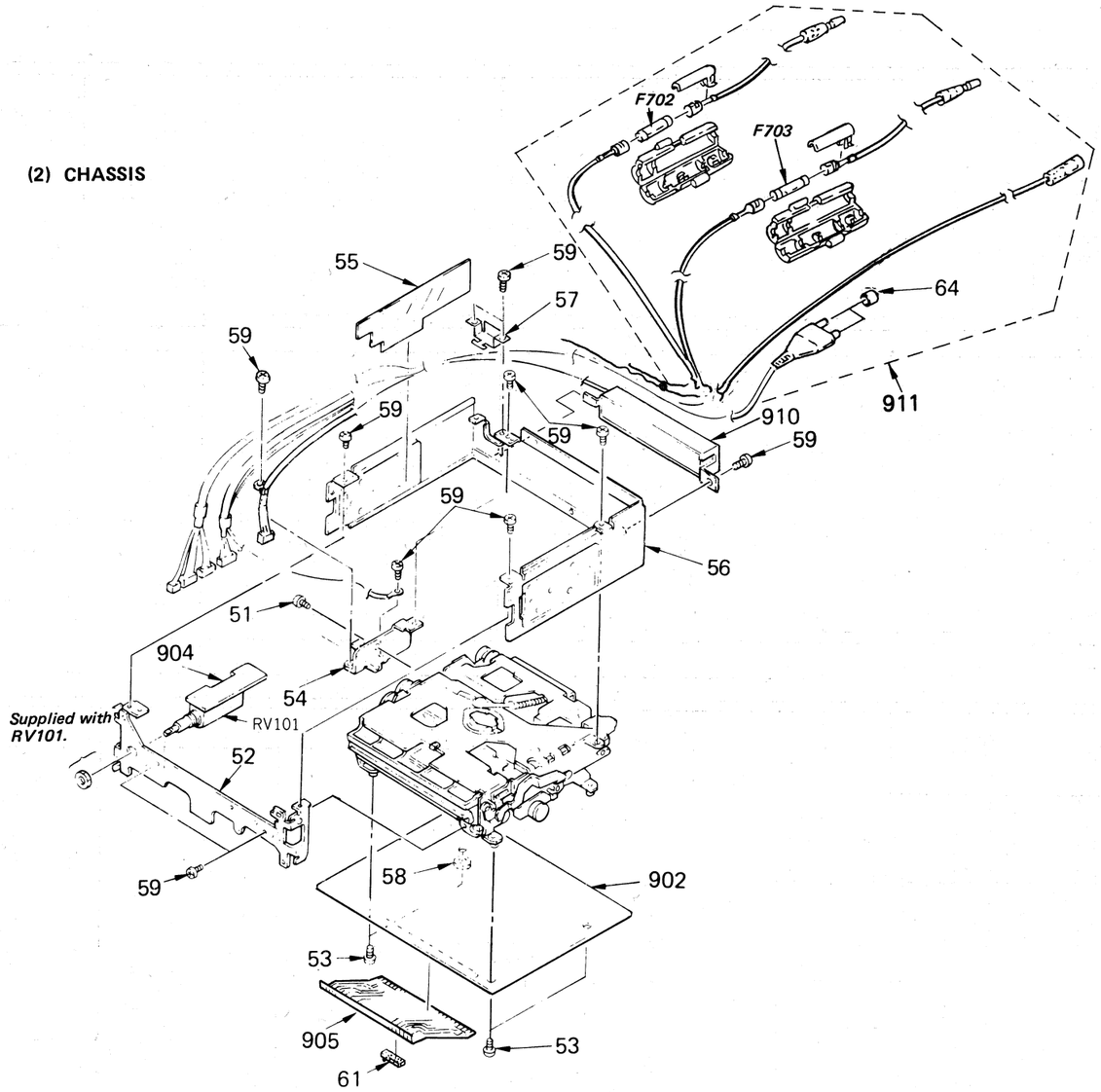
(2) CHASSIS



No.	Part No.	Description	Remarks
51	7-621-773-86	SCREW +PTT 2.6X4 (S)	
52	*3-339-422-01	BRACKET (A)	
53	7-621-770-87	SCREW +B 2.6X5	
54	*3-339-406-01	BRACKET (B)	
55	*3-339-468-01	SPACER, SIDE	
57	*3-330-993-01	RETAINER, CORD	
58	7-688-003-01	W 3, SMALL	
59	7-621-770-67	SCREW +PTT 2.6X6 (S)	
61	*3-330-948-01	SPACER	
64	3-339-410-01	COVER, PIN JACK	

No.
902
904
905
910
911
F70
F70

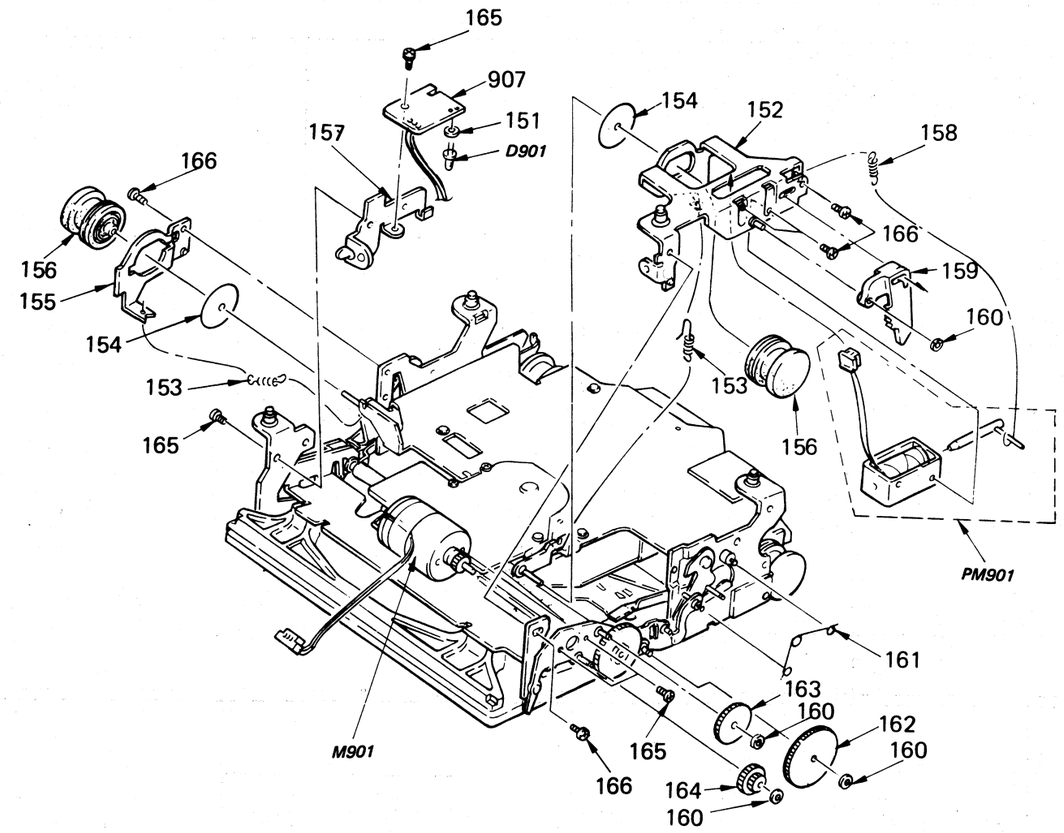
(2) CHASSIS



No.	Part No.	Description	Remarks
51	7-621-773-86	SCREW +PTT 2.6X4 (S)	
52	*3-339-422-01	BRACKET (A)	
53	7-621-770-87	SCREW +B 2.6X5	
54	*3-339-406-01	BRACKET (B)	
55	*3-339-468-01	SPACER, SIDE	
57	*3-330-993-01	RETAINER, CORD	
58	7-688-003-01	W 3, SMALL	
59	7-621-770-67	SCREW +PTT 2.6X6 (S)	
61	*3-330-948-01	SPACER	
64	3-339-410-01	COVER, PIN JACK	

No.	Part No.	Description	Remarks
902	*A-3260-740-A	MOUNTED PCB, MAIN	
904	*1-624-478-11	PC BOARD, VOLUME	
905	1-621-946-11	PC BOARD, TRANSLATION FLEXIBLE	
910	1-464-852-11	CONVERTER, DC-DC	
911	1-559-822-11	CORD (WITH JACK)	
F702	1-532-414-11	FUSE 1A	
F703	1-532-404-11	FUSE 0.1A	

(3) MG-CDX-70



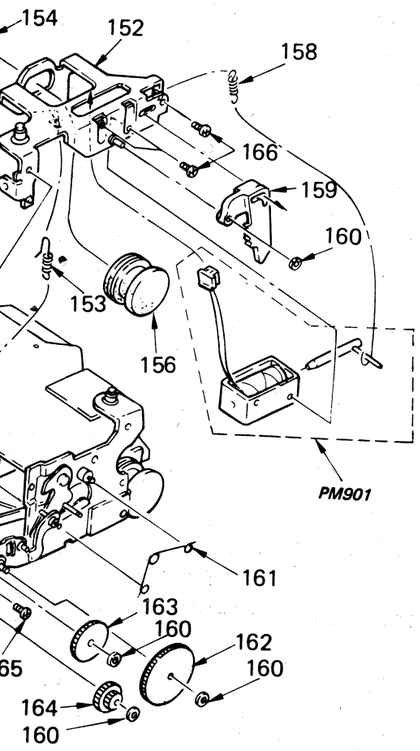
No.	Part No.	Description	Remarks
151	*3-330-944-01	SPACER (LED)	
152	X-3320-558-1	BRACKET (B) (2)ASSY, INSULATOR	
153	3-330-916-01	SPRING, TENSION	
154	3-323-263-01	WASHER, TEFLON	
155	*3-330-943-01	BRACKET (A) (2), INSULATOR	
156	3-330-929-01	DAMPER (S), HYPER	
157	*3-330-919-01	BRACKET, LED PC BOARD	
158	*3-323-246-01	SPRING, TENSION	
159	3-330-930-01	RACK	
160	3-573-936-00	STOPPER, REEL	

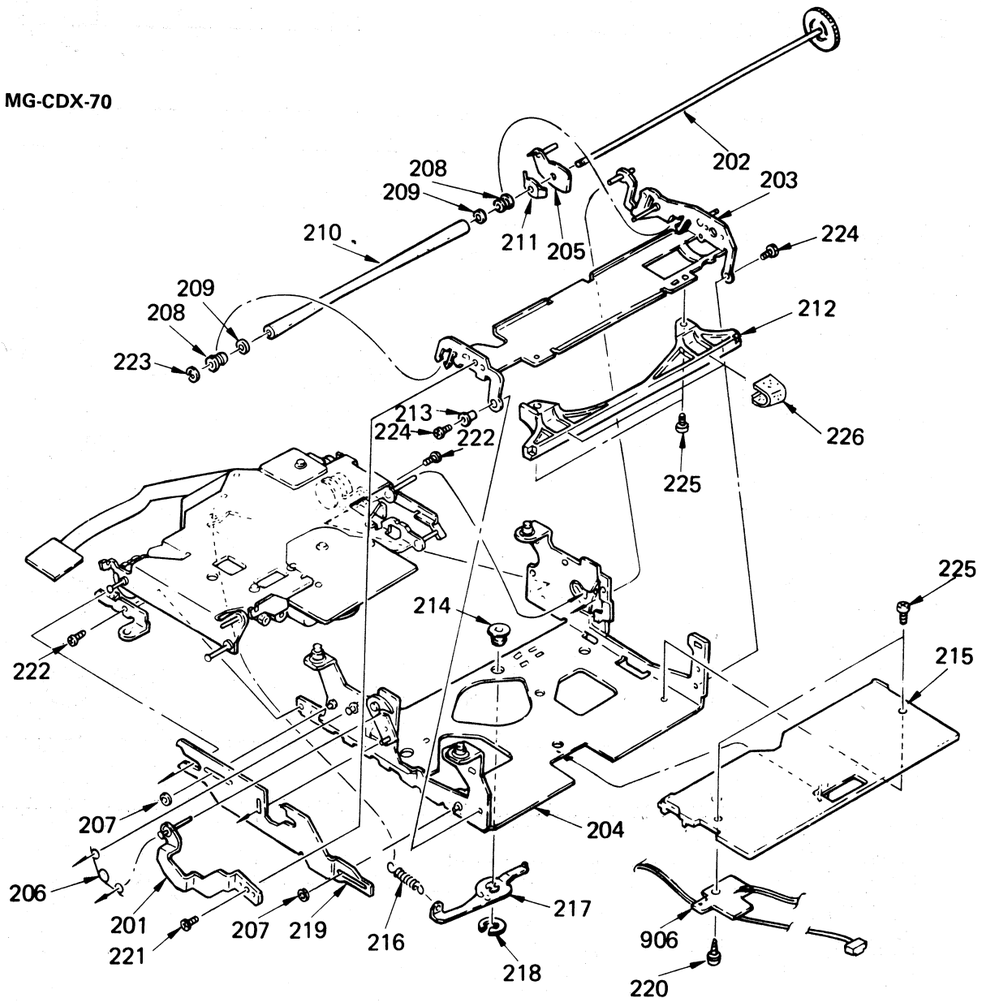
No.	Part No.	Description	Remarks
161	3-330-917-01	SPRING (S)	
162	3-320-552-01	GEAR, DOWN	
163	3-330-904-01	GEAR (B2)	
164	3-330-903-01	GEAR (A2)	
165	7-628-253-00	SCREW +PS 2X4	
166	7-627-554-07	SCREW, PRECISION +P 2X2.2	
907	*1-622-018-11	PC BOARD, LED (D)	
M901	X-3320-565-1	MOTOR ASSY, LOADING	
PM901	1-454-435-11	SOLENOID, PLUNGER	

(4) MG-CDX

No.	Part No.
201	*X-3320-5
202	X-3320-5
203	X-3320-5
204	*X-3320-5
205	X-3320-5
206	3-330-91
208	3-320-56
209	3-701-43
210	3-323-23
211	3-330-91
212	*3-330-93
213	3-323-22
214	*3-329-89

(4) MG-CDX-70



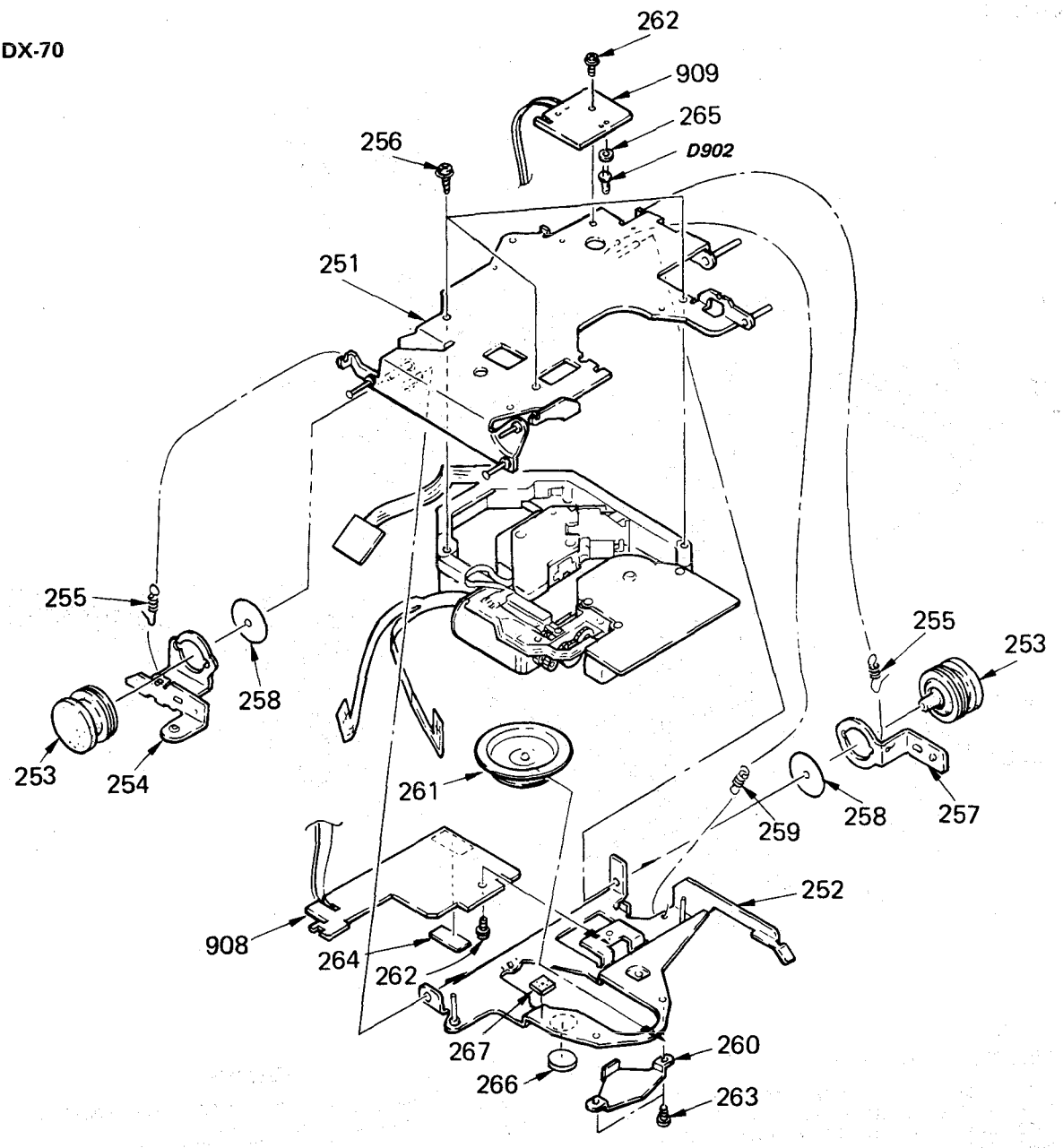


No.	Description	Remarks
0-917-01	SPRING (S)	
0-552-01	GEAR, DOWN	
0-904-01	GEAR (B2)	
0-903-01	GEAR (A2)	
8-253-00	SCREW +PS 2X4	
7-554-07	SCREW, PRECISION +P 2X2.2	
2-018-11	PC BOARD, LED (D)	
20-565-1	MOTOR ASSY, LOADING	
4-435-11	SOLENOID, PLUNGER	

No.	Part No.	Description	Remarks
201	*X-3320-559-1	ARM (S) ASSY, ASSIST	
202	X-3320-566-1	SHAFT ASSY, ROLLER	
203	X-3320-563-1	ARM (S2) ASSY, DRIVING ROLLER	
204	*X-3320-562-1	FRAME (S2) ASSY, MD	
205	X-3320-557-1	LEVER (S) ASSY, FRICTION	
206	3-330-917-01	SPRING (S)	
208	3-320-560-01	BEARING (LOWER)	
209	3-701-438-31	WASHER	
210	3-323-231-02	ROLLER (LOWER)	
211	3-330-918-01	SPRING (S)	
212	*3-330-937-01	SHUTTER, DISK	
213	3-323-229-01	SHAFT (RIGHT), ROLLER ARM	
214	*3-329-899-01	SHAFT, ANGLE SELECTOR	

No.	Part No.	Description	Remarks
215	*3-330-934-01	GUIDE, SUPER DISK	
216	3-330-915-01	SPRING, TENSION	
217	*3-330-902-01	SELECTOR, FITTING SQUARE	
218	7-624-109-04	RETAINING, RING E-5	
219	*3-330-928-01	HOOK (B) (S), LOCK	
220	7-685-103-14	+ PTPWH (2X5)	
221	7-628-253-00	SCREW +PS 2X4	
222	7-627-554-07	SCREW, PRECISION +P 2X2.2	
223	7-624-104-04	STOP RING 2.0, TYPE -E	
224	7-627-452-38	SCREW, PRECISION +K 2X5	
225	7-621-255-25	SCREW +P 2X4	
226	*3-330-980-01	SHEET, SHUTTER	
906	*1-622-017-11	PC BOARD, DET (D)	

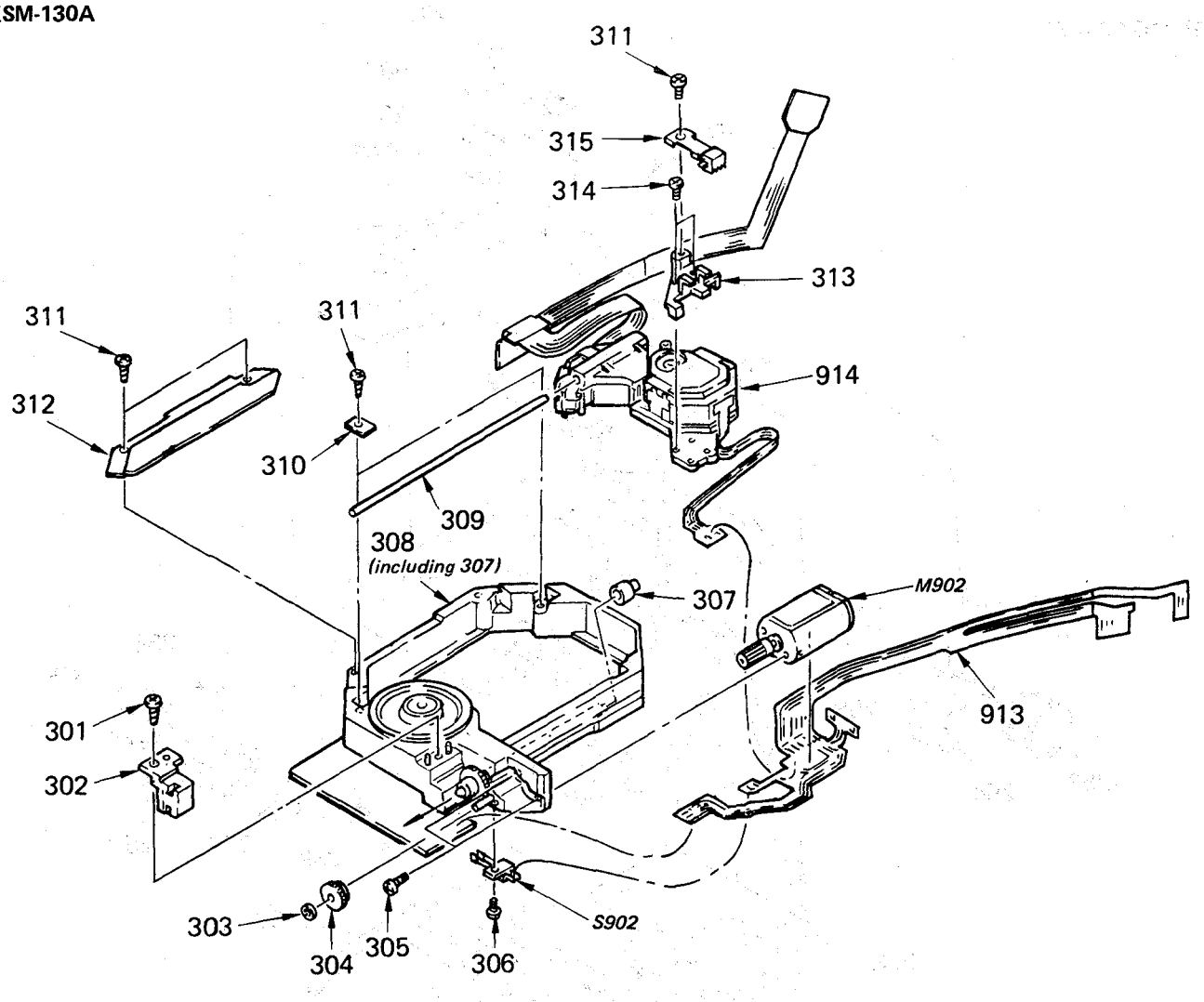
(5) MG-CDX-70



No.	Part No.	Description	Remarks
251	*X-3320-564-1	CHASSIS ASSY, MD FITTING	
252	X-3320-561-1	ARM (2) ASSY, CHUCKING	
253	3-330-929-01	DAMPER (S), HYPER	
254	*3-330-907-01	BRACKET (C) (2), INSULATOR	
255	3-330-916-01	SPRING, TENSION	
256	7-685-103-14	+ PTPWH (2X5)	
257	*3-330-908-01	BRACKET (D) (2), INSULATOR	
258	3-323-263-01	WASHER, TEFLON	
259	3-330-920-01	SPRING (CHUCKING), TENSION	
260	3-330-905-01	RETAINER (S), THRUST	

No.	Part No.	Description	Remarks
261	3-330-931-01	PLATE (S), CHUCK	
262	7-628-253-00	SCREW +PS 2X4	
263	7-627-552-18	SCREW, PRECISION +P 1.7X1.6	
264	*3-330-951-01	SHEET, INSULATING, DET (E)	
265	*3-330-944-01	SPACER (LED)	
266	3-323-290-01	CUSHION	
267	*3-330-979-01	SHEET (C.A.), PROTECTION	
908	*1-622-019-11	PC BOARD, DET (E)	
909	*1-622-020-11	PC BOARD, LED (E)	

(6) KSM-130A



No.	Part No.	Description	Remarks
301	7-685-203-19	SCREW +K 2X5 TYPE2 NON-SLIT	
302	X-2640-611-1	RETAINER ASSY, THRUST	
303	3-321-813-01	WASHER, COTTER POLYETHYLENE	
304	2-640-625-01	GEAR (B)	
305	7-627-554-17	PRECISION SCREW +P 2X3.5 TYPE 3	
306	2-640-620-03	SCREW (B) (1.4X3), TAPPING	
307	2-640-629-02	RETAINER (C), THRUST	
308	X-3320-567-1	CHASSIS ASSY, MD SLED	307
309	*2-640-632-01	SHAFT, GUIDE	
310	2-640-645-01	RETAINER, GUIDE SHAFT	

No.	Part No.	Description	Remarks
311	7-685-102-19	SCREW +P 2X4 TYPE2 NON-SLIT	
312	2-640-623-01	COVER, MD	
313	2-640-638-01	BEARING, FEED GUIDE	
314	7-627-852-17	+P 1.7X4	
315	2-640-622-01	NUT, FEED	
913	1-621-406-11	PC BOARD, MOTOR FLEXIBLE	
914	⚠8-848-067-01	PICKUP, OPTICS KSS-160B	
M902	X-3320-568-1	MOTOR ASSY, SLED	
S902	1-554-938-11	SWITCH, LEAF (LIMIT)	

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

SECTION 6
ELECTRICAL PARTS LIST

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- Items marked "★" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- If there are two or more same circuits in a set such as a stereophonic machine, only typical circuit parts may be indicated and capacitors and resistors in other same circuits may be omitted.

CAPACITORS:
MF: μF, PF: μμF.

RESISTORS
- All resistors are in ohms.
- F: nonflammable

COILS
- MMH: mH, UH: μH

SEMICONDUCTORS
In each case, U: μ, for example:
UA...: μA..., UPA...: μPA...,
UPC...: μPC, UPD...: μPD...

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Ref.No.	Part No.	Description			
902	*A-3260-740-A	MOUNTED PCB, MAIN			
903	*A-3216-348-A	INDICATION BLOCK ASSY			
904	*1-624-478-11	PC BOARD, VOLUME			
905	1-621-946-11	PC BOARD, TRANSLATION FLEXIBLE			
906	*1-622-017-11	PC BOARD, DET (D)			
907	*1-622-018-11	PC BOARD, LED (D)			
908	*1-622-019-11	PC BOARD, DET (E)			
909	*1-622-020-11	PC BOARD, LED (E)			
910	1-464-852-11	CONVERTER, DC-DC			
911	1-559-822-11	CORD (WITH JACK)			
913	1-621-406-11	PC BOARD, MOTOR FLEXIBLE			
914	⚠8-848-067-01	PICKUP, OPTICS KSS-160B			
C101	1-163-189-00	CERAMIC CHIP	220PF	5%	50V
C103	1-163-175-00	CERAMIC CHIP	56PF	5%	50V
C104	1-163-211-00	CERAMIC CHIP	0.0018MF	5%	50V
C105	1-163-181-00	CERAMIC CHIP	100PF	5%	50V
C106	1-163-181-00	CERAMIC CHIP	100PF	5%	50V
C107	1-163-188-00	CERAMIC CHIP	200PF	5%	50V
C108	1-163-181-00	CERAMIC CHIP	100PF	5%	50V
C109	1-124-767-00	ELECT	2.2MF	20%	50V
C110	1-124-270-11	ELECT	0.47MF	20%	50V
C111	1-124-967-11	ELECT	10MF	20%	10V
C112	1-130-479-00	FILM	0.0047MF	5%	50V
C113	1-136-156-00	FILM	0.018MF	5%	50V
C114	1-136-158-00	FILM	0.027MF	5%	50V
C115	1-136-166-00	FILM	0.12MF	5%	50V
C117	1-124-767-00	ELECT	2.2MF	20%	50V
C120	1-163-173-00	CERAMIC CHIP	47PF	5%	50V
C121	1-163-181-00	CERAMIC CHIP	100PF	5%	50V
C127	1-163-181-00	CERAMIC CHIP	100PF	5%	50V
C128	1-163-173-00	CERAMIC CHIP	47PF	5%	50V
C201	1-163-189-00	CERAMIC CHIP	220PF	5%	50V
C203	1-163-175-00	CERAMIC CHIP	56PF	5%	50V
C204	1-163-211-00	CERAMIC CHIP	0.0018MF	5%	50V
C205	1-163-181-00	CERAMIC CHIP	100PF	5%	50V
C206	1-163-181-00	CERAMIC CHIP	100PF	5%	50V
C207	1-163-188-00	CERAMIC CHIP	200PF	5%	50V
C208	1-163-181-00	CERAMIC CHIP	100PF	5%	50V
C209	1-124-767-00	ELECT	2.2MF	20%	50V
C210	1-124-270-11	ELECT	0.47MF	20%	50V
C211	1-124-967-11	ELECT	10MF	20%	10V
C212	1-130-479-00	FILM	0.0047MF	5%	50V
C213	1-136-156-00	FILM	0.018MF	5%	50V
C214	1-136-158-00	FILM	0.027MF	5%	50V

Ref.No.	Part No.	Description			
C215	1-136-166-00	FILM	0.12MF	5%	50V
C217	1-124-767-00	ELECT	2.2MF	20%	50V
C220	1-163-173-00	CERAMIC CHIP	47PF	5%	50V
C221	1-163-181-00	CERAMIC CHIP	100PF	5%	50V
C227	1-163-181-00	CERAMIC CHIP	100PF	5%	50V
C228	1-163-173-00	CERAMIC CHIP	47PF	5%	50V
C301	1-124-224-00	ELECT	47MF	20%	6.3V
C302	1-124-224-00	ELECT	47MF	20%	6.3V
C303	1-124-224-00	ELECT	47MF	20%	6.3V
C304	1-124-224-00	ELECT	47MF	20%	6.3V
C309	1-124-224-00	ELECT	47MF	20%	6.3V
C310	1-124-224-00	ELECT	47MF	20%	6.3V
C311	1-124-224-00	ELECT	47MF	20%	6.3V
C312	1-124-224-00	ELECT	47MF	20%	6.3V
C313	1-124-442-00	ELECT	330MF	20%	6.3V
C314	1-124-442-00	ELECT	330MF	20%	6.3V
C315	1-163-063-00	CERAMIC CHIP	0.022MF	10%	50V
C316	1-163-063-00	CERAMIC CHIP	0.022MF	10%	50V
C501	1-136-171-00	FILM	0.033MF	5%	50V
C502	1-136-153-00	FILM	0.01MF	5%	50V
C503	1-136-153-00	FILM	0.01MF	5%	50V
C505	1-126-123-11	ELECT	56MF	20%	6.3V
C506	1-136-171-00	FILM	0.033MF	5%	50V
C507	1-124-224-00	ELECT	47MF	20%	6.3V
C508	1-124-465-00	ELECT	0.47MF	20%	50V
C509	1-136-153-00	FILM	0.01MF	5%	50V
C510	1-126-123-11	ELECT	56MF	20%	6.3V
C511	1-124-224-00	ELECT	47MF	20%	6.3V
C512	1-136-165-00	FILM	0.1MF	5%	50V
C513	1-136-165-00	FILM	0.1MF	5%	50V
C514	1-136-165-00	FILM	0.1MF	5%	50V
C515	1-131-368-00	TANTALUM	3.3MF	10%	16V
C516	1-124-224-00	ELECT	47MF	20%	6.3V
C517	1-136-165-00	FILM	0.1MF	5%	50V
C519	1-136-165-00	FILM	0.1MF	5%	50V
C520	1-102-947-00	CERAMIC	10PF	0.25PF	50V
C521	1-136-175-00	FILM	0.068MF	5%	50V
C522	1-124-584-00	ELECT	100MF	20%	6.3V
C523	1-124-584-00	ELECT	100MF	20%	6.3V
C524	1-124-584-00	ELECT	100MF	20%	6.3V
C525	1-124-584-00	ELECT	100MF	20%	6.3V
C526	1-136-162-00	FILM	0.056MF	20%	50V
C527	1-124-257-00	ELECT	2.2μH	20%	50V
C528	1-124-224-00	ELECT	47MF	20%	6.3V
C529	1-124-224-00	ELECT	47MF	20%	6.3V

Ref.No.	Part No.	Description			
C530	1-102-074-00	CERAMIC	0.001MF	10%	50V
C531	1-124-465-00	ELECT	0.47MF	20%	50V
C532	1-136-171-00	FILM	0.033MF	5%	50V
C533	1-130-475-00	FILM	0.0022MF	5%	50V
C534	1-136-156-00	FILM	0.018MF	5%	50V
C535	1-163-205-00	CERAMIC CHIP	0.001MF	5%	50V
C536	1-124-224-00	ELECT	47MF	20%	6.3V
C537	1-162-568-11	CERAMIC CHIP	0.33MF		25V
C538	1-130-479-00	FILM	0.0047MF	5%	50V
C539	1-124-255-00	ELECT	1MF	20%	50V
C540	1-124-255-00	ELECT	1MF	20%	50V
C541	1-163-159-00	CERAMIC CHIP	12PF	5%	50V
C542	1-163-159-00	CERAMIC CHIP	12PF	5%	50V
C543	1-124-229-00	ELECT	33MF	20%	10V
C545	1-124-229-00	ELECT	33MF	20%	10V
C546	1-124-225-00	ELECT	100MF	20%	6.3V
C547	1-163-159-00	CERAMIC CHIP	12PF	5%	50V
C548	1-163-159-00	CERAMIC CHIP	12PF	5%	50V
C550	1-124-258-00	ELECT	3.3MF	20%	35V
C551	1-124-484-11	ELECT	220MF	20%	35V
C552	1-124-224-00	ELECT	47MF	20%	6.3V
C553	1-163-205-00	CERAMIC CHIP	0.001MF	5%	50V
C556	1-163-185-00	CERAMIC CHIP	150PF	5%	50V
C557	1-163-077-00	CERAMIC CHIP	0.1MF		50V
C558	1-124-234-00	ELECT	22MF	20%	10V
C559	1-124-245-00	ELECT	4.7MF	20%	25V
C560	1-124-462-00	ELECT	10MF	20%	16V
C562	1-124-442-00	ELECT	330MF	20%	6.3V
C563	1-124-442-00	ELECT	330MF	20%	6.3V
C564	1-124-442-00	ELECT	330MF	20%	6.3V
C565	1-124-442-00	ELECT	330MF	20%	6.3V
C567	1-163-077-00	CERAMIC CHIP	0.1MF		50V
C568	1-124-144-00	ELECT	220MF	20%	16V
C569	1-163-189-00	CERAMIC CHIP	220PF	10%	50V
C570	1-163-077-00	CERAMIC CHIP	0.1MF		50V
C572	1-163-165-00	CERAMIC CHIP	20PF	5%	50V
C573	1-163-059-00	CERAMIC CHIP	0.01MF	10%	50V
C574	1-163-077-00	CERAMIC CHIP	0.1MF		50V
C575	1-163-077-00	CERAMIC CHIP	0.1MF		50V
C576	1-163-077-00	CERAMIC CHIP	0.1MF		50V
C577	1-163-077-00	CERAMIC CHIP	0.1MF		50V
C580	1-163-063-00	CERAMIC CHIP	0.022MF	10%	50V
C581	1-163-063-00	CERAMIC CHIP	0.022MF	10%	50V
C582	1-163-155-00	CERAMIC CHIP	8PF	0.25PF	50V
C584	1-124-463-00	ELECT	0.1MF	20%	50V
C591	1-163-077-00	CERAMIC CHIP	0.1MF		50V
C592	1-163-077-00	CERAMIC CHIP	0.1MF		50V
C593	1-124-242-00	ELECT	33MF	20%	16V
C594	1-163-077-00	CERAMIC CHIP	0.1MF		50V
C595	1-102-942-00	CERAMIC	5PF	0.5PF	50V
C596	1-102-942-00	CERAMIC	5PF	0.5PF	50V
C597	1-102-816-00	CERAMIC	120PF	5%	50V
CNP301*1-564-004-00		PIN, CONNECTOR 5P			
CNP302*1-564-006-11		PIN, CONNECTOR 7P			
CNP501*1-563-855-11		HOUSING, CONNECTOR 12P			

Ref.No.	Part No.	Description
CNP502	1-562-630-11	SOCKET, CONNECTOR
CNP503	1-562-631-11	SOCKET, CONNECTOR
CNP504*1-564-015-00		PIN, CONNECTOR 5P
CNP505*1-564-013-00		PIN, CONNECTOR 3P
CNP506*1-564-012-00		PIN, CONNECTOR 2P
CNP507*1-564-006-51		PIN, CONNECTOR 7P
CNP508*1-564-007-00		PIN, CONNECTOR 8P
CNP509*1-564-008-51		PIN, CONNECTOR 9P
CNP514*1-564-011-51		PIN, CONNECTOR 12P
D502	8-719-940-25	DIODE DSC010
D504	8-719-200-02	DIODE 10E-2
D505	8-719-100-35	DIODE RD5.6EB3
D506	8-719-911-06	DIODE 1SS106
D507	8-719-940-25	DIODE DSC010
D508	8-719-940-35	DIODE DCA015
D509	8-719-940-35	DIODE DCA015
D510	8-719-110-02	DIODE RD7.5ES-B1
D512	9-987-703-01	DIODE DSB015-TA
D807	8-719-945-09	DIODE BG3668S
D808	8-719-945-10	DIODE AA3668S
D823	8-719-404-22	DIODE LN1451C
D824	8-719-404-22	DIODE LN1451C
D825	8-719-404-22	DIODE LN1451C
D830	8-719-110-17	DIODE RD10ES-B2
D901	8-719-812-31	LED TLR123
D902	8-719-812-31	LED TLR123
F701	1-532-419-11	FUSE 3.15A
F702	1-532-414-11	FUSE 1A
F703	1-532-404-11	FUSE 0.7A
FL1	1-519-324-21	INDICATOR TUBE, FLUORESCENT
IC101	8-759-604-64	IC M5203FP
IC102	8-759-604-64	IC M5203FP
IC201	8-759-604-64	IC M5203FP
IC202	8-759-604-64	IC M5203FP
IC301	8-759-924-49	IC PCM55HP-S
IC302	8-759-200-81	IC TC4053BF
IC303	8-759-200-81	IC TC4053BF
IC304	8-759-109-70	IC UPC4560G2
IC501	8-759-937-87	IC CXA1081Q
IC502	8-752-031-61	IC CXA1082AQ
IC503	8-752-322-32	IC CXD1130Q
IC504	8-759-940-89	IC L272M
IC505	8-759-942-55	IC MB88505H-530M
IC506	8-759-940-84	IC MB88505-502M
IC507	8-752-323-64	IC CXK5816M-12L
IC508	8-759-604-67	IC M5494OFP
IC512	8-759-940-80	IC MB88201-534M
IC514	8-759-940-45	IC S-8054HN-CB
IC515	8-759-940-45	IC S-8054HN-CB
IC516	8-759-940-45	IC S-8054HN-CB
IC801	8-759-200-99	IC TC4051BF
JW501	1-249-366-11	CARBON MELF 0 5% 1/5W
JW502	1-249-366-11	CARBON MELF 0 5% 1/5W
JW503	1-249-366-11	CARBON MELF 0 5% 1/5W
JW504	1-249-366-11	CARBON MELF 0 5% 1/5W

Ref.No.	Part No.	Description
L301	1-410-198-51	INDUCTOR CHIP 3.3UH
L302	1-410-198-51	INDUCTOR CHIP 3.3UH
L501	1-410-336-11	INDUCTOR 220UH
L502	1-410-204-31	INDUCTOR CHIP 10UH
L503	1-410-198-51	INDUCTOR CHIP 3.3UH
L504	1-410-198-51	INDUCTOR CHIP 3.3UH
L505	1-410-320-11	INDUCTOR 2.2UH
L506	1-410-204-31	INDUCTOR CHIP 10UH
M901	X-3320-565-1	MOTOR ASSY, LOADING
M902	X-3320-568-1	MOTOR ASSY, SLED
PL801	1-518-615-11	LAMP, PILOT
PL802	1-518-615-11	LAMP, PILOT
PM901	1-454-435-11	SOLENOID, PLUNGER
Q501	8-729-807-50	TRANSISTOR 2SD1623
Q502	8-729-807-33	TRANSISTOR 2SB1123
Q503	8-729-807-50	TRANSISTOR 2SD1623
Q504	8-729-807-33	TRANSISTOR 2SB1123
Q505	8-729-800-91	TRANSISTOR 2SA1179M5
Q506	8-729-807-33	TRANSISTOR 2SB1123
Q507	8-729-273-33	TRANSISTOR 2SC2712
Q508	8-729-805-65	TRANSISTOR 2SA1344
Q509	8-729-805-65	TRANSISTOR 2SA1344
Q510	8-729-805-45	TRANSISTOR 2SC3395
Q511	8-729-805-41	TRANSISTOR 2SC3398
Q514	8-729-100-76	TRANSISTOR 2SA812
Q515	8-729-100-76	TRANSISTOR 2SA812
Q516	8-729-807-50	TRANSISTOR 2SD1623
Q517	8-729-100-76	TRANSISTOR 2SA812
Q518	8-729-271-23	TRANSISTOR 2SC2712
Q519	8-729-271-23	TRANSISTOR 2SC2712
Q520	8-729-271-23	TRANSISTOR 2SC2712
Q522	8-729-805-45	TRANSISTOR 2SC3395
Q523	8-729-904-63	TRANSISTOR DTB123YK
Q524	8-729-805-41	TRANSISTOR 2SC3398
Q525	8-729-904-63	TRANSISTOR DTB123YK
Q526	8-729-271-23	TRANSISTOR 2SC2712
Q528	8-729-805-41	TRANSISTOR 2SC3398
Q529	8-729-805-41	TRANSISTOR 2SC3398
Q530	8-729-805-41	TRANSISTOR 2SC3398
Q531	8-729-805-41	TRANSISTOR 2SC3398
Q532	8-729-805-41	TRANSISTOR 2SC3398
Q533	8-729-900-99	TRANSISTOR DTA144WK
Q534	8-729-805-41	TRANSISTOR 2SC3398
Q536	8-729-904-48	TRANSISTOR DTB113EK
Q537	8-729-904-48	TRANSISTOR DTB113EK
Q538	8-729-904-78	TRANSISTOR DTD113ZK
Q539	8-729-904-78	TRANSISTOR DTD113ZK
Q540	8-729-271-23	TRANSISTOR 2SC2712
Q541	8-729-805-64	TRANSISTOR 2SA1510
Q801	8-729-807-50	TRANSISTOR 2SD1623
Q901	8-729-402-08	TRANSISTOR PN147-LF-R
Q902	8-729-402-08	TRANSISTOR PN147-LF-R
R101	1-249-425-11	CARBON MELF 4.7K 5% 1/5W
R102	1-249-432-11	CARBON MELF 18K 5% 1/5W
R105	1-215-452-00	CARBON MELF 20K 5% 1/5W
R106	1-215-452-00	CARBON MELF 20K 5% 1/5W
R108	1-215-444-00	CARBON MELF 9.1K 5% 1/5W

Ref.No.	Part No.	Description
R109	1-249-432-11	CARBON MELF 18K 5% 1/5W
R110	1-249-432-11	CARBON MELF 18K 5% 1/5W
R111	1-215-444-00	CARBON MELF 9.1K 5% 1/5W
R112	1-249-438-11	CARBON MELF 56K 5% 1/5W
R113	1-249-429-11	CARBON MELF 10K 5% 1/5W
R114	1-249-421-11	CARBON MELF 2.2K 5% 1/5W
R115	1-249-420-11	CARBON MELF 1.8K 5% 1/5W
R116	1-215-485-00	CARBON MELF 470K 5% 1/5W
R117	1-249-413-11	CARBON MELF 470 5% 1/5W
R118	1-249-430-11	CARBON MELF 12K 5% 1/5W
R119	1-215-432-00	CARBON MELF 3K 5% 1/5W
R120	1-215-493-00	CARBON MELF 1M 5% 1/5W
R121	1-249-424-11	CARBON MELF 3.9K 5% 1/5W
R122	1-249-413-11	CARBON MELF 470 5% 1/5W
R123	1-216-242-00	METAL GLAZE 68K 5% 1/8W
R124	1-216-225-00	METAL GLAZE 13K 5% 1/8W
R125	1-249-425-11	CARBON MELF 4.7K 5% 1/5W
R130	1-249-421-11	CARBON MELF 2.2K 5% 1/5W
R131	1-216-240-00	METAL GLAZE 56K 5% 1/8W
R201	1-249-425-11	CARBON MELF 4.7K 5% 1/5W
R202	1-249-432-11	CARBON MELF 18K 5% 1/5W
R205	1-215-452-00	CARBON MELF 20K 5% 1/5W
R206	1-215-452-00	CARBON MELF 20K 5% 1/5W
R208	1-215-444-00	CARBON MELF 9.1K 5% 1/5W
R209	1-249-432-11	CARBON MELF 18K 5% 1/5W
R210	1-249-432-11	CARBON MELF 18K 5% 1/5W
R211	1-215-444-00	CARBON MELF 9.1K 5% 1/5W
R212	1-249-438-11	CARBON MELF 56K 5% 1/5W
R213	1-249-429-11	CARBON MELF 10K 5% 1/5W
R214	1-249-421-11	CARBON MELF 2.2K 5% 1/5W
R215	1-249-420-11	CARBON MELF 1.8K 5% 1/5W
R216	1-215-485-00	CARBON MELF 470K 5% 1/5W
R217	1-249-413-11	CARBON MELF 470 5% 1/5W
R218	1-249-430-11	CARBON MELF 12K 5% 1/5W
R219	1-215-432-00	CARBON MELF 3K 5% 1/5W
R220	1-215-493-00	CARBON MELF 1M 5% 1/5W
R221	1-249-424-11	CARBON MELF 3.9K 5% 1/5W
R222	1-249-413-11	CARBON MELF 470 5% 1/5W
R223	1-216-242-00	METAL GLAZE 68K 5% 1/8W
R224	1-216-225-00	METAL GLAZE 13K 5% 1/8W
R225	1-249-425-11	CARBON MELF 4.7K 5% 1/5W
R230	1-249-421-11	CARBON MELF 2.2K 5% 1/5W
R231	1-216-240-00	METAL GLAZE 56K 5% 1/8W
R301	1-249-429-11	CARBON MELF 10K 5% 1/5W
R303	1-249-425-11	CARBON MELF 4.7K 5% 1/5W
R304	1-249-425-11	CARBON MELF 4.7K 5% 1/5W
R501	1-249-431-11	CARBON MELF 15K 5% 1/5W
R503	1-215-448-00	CARBON MELF 13K 5% 1/5W
R504	1-249-421-11	CARBON MELF 2.2K 5% 1/5W
R505	1-249-401-11	CARBON MELF 47 5% 1/5W
R506	1-249-417-11	CARBON MELF 1K 5% 1/5W
R507	1-215-394-00	CARBON MELF 75 5% 1/5W
R508	1-249-429-11	CARBON MELF 10K 5% 1/5W
R509	1-249-441-11	CARBON MELF 100K 5% 1/5W
R510	1-215-446-00	CARBON MELF 11K 5% 1/5W
R511	1-215-474-00	CARBON MELF 160K 5% 1/5W

Ref.No.	Part No.	Description			
R512	1-249-429-11	CARBON MELF	10K	5%	1/5W
R513	1-215-485-00	CARBON MELF	470K	5%	1/5W
R514	1-249-440-11	CARBON MELF	82K	5%	1/5W
R515	1-249-438-11	CARBON MELF	56K	5%	1/5W
R516	1-215-481-00	CARBON MELF	330K	5%	1/5W
R517	1-215-471-00	CARBON MELF	120K	5%	1/5W
R518	1-249-439-11	CARBON MELF	68K	5%	1/5W
R519	1-249-428-11	CARBON MELF	8.2K	5%	1/5W
R520	1-215-486-00	CARBON MELF	510K	5%	1/5W
R521	1-249-429-11	CARBON MELF	10K	5%	1/5W
R522	1-249-437-11	CARBON MELF	47K	5%	1/5W
R523	1-249-423-11	CARBON MELF	3.3K	5%	1/5W
R524	1-215-452-00	CARBON MELF	20K	5%	1/5W
R525	1-215-493-00	CARBON MELF	1M	5%	1/5W
R526	1-249-001-00	CARBON MELF	1	5%	1/5W
R527	1-249-001-00	CARBON MELF	1	5%	1/5W
R528	1-249-001-00	CARBON MELF	1	5%	1/5W
R529	1-249-001-00	CARBON MELF	1	5%	1/5W
R530	1-215-485-00	CARBON MELF	470K	5%	1/5W
R531	1-249-429-11	CARBON MELF	10K	5%	1/5W
R533	1-249-429-11	CARBON MELF	10K	5%	1/5W
R534	1-249-441-11	CARBON MELF	100K	5%	1/5W
R535	1-249-429-11	CARBON MELF	10K	5%	1/5W
R536	1-249-441-11	CARBON MELF	100K	5%	1/5W
R537	1-249-429-11	CARBON MELF	10K	5%	1/5W
R538	1-249-429-11	CARBON MELF	10K	5%	1/5W
R540	1-249-408-11	CARBON MELF	180	5%	1/5W
R541	1-249-408-11	CARBON MELF	180	5%	1/5W
R542	1-215-454-00	CARBON MELF	24K	5%	1/5W
R543	1-249-429-11	CARBON MELF	10K	5%	1/5W
R544	1-249-413-11	CARBON MELF	470	5%	1/5W
R545	1-249-442-11	CARBON MELF	510	5%	1/5W
R546	1-249-417-11	CARBON MELF	1K	5%	1/5W
R547	1-249-433-11	CARBON MELF	22K	5%	1/5W
R548	1-249-417-11	CARBON MELF	1K	5%	1/5W
R549	1-249-433-11	CARBON MELF	22K	5%	1/5W
R550	1-249-393-11	CARBON MELF	10	5%	1/5W
R551	1-249-433-11	CARBON MELF	22K	5%	1/5W
R552	1-249-437-11	CARBON MELF	47K	5%	1/5W
R553	1-249-423-11	CARBON MELF	3.3K	5%	1/5W
R554	1-249-399-11	CARBON MELF	33	5%	1/5W
R555	1-249-429-11	CARBON MELF	10K	5%	1/5W
R556	1-249-433-11	CARBON MELF	22K	5%	1/5W
R557	1-249-441-11	CARBON MELF	100K	5%	1/5W
R558	1-215-440-00	CARBON MELF	6.2K	5%	1/5W
R559	1-249-437-11	CARBON MELF	47K	5%	1/5W
R568	1-249-393-11	CARBON MELF	10	5%	1/5W
R569	1-249-393-11	CARBON MELF	10	5%	1/5W
R570	1-249-402-11	CARBON MELF	56	5%	1/5W
R571	1-249-401-11	CARBON MELF	47	5%	1/5W
R572	1-249-405-11	CARBON MELF	100	5%	1/5W
R574	1-249-425-11	CARBON MELF	4.7K	5%	1/5W
R575	1-249-429-11	CARBON MELF	10K	5%	1/5W
R576	1-215-396-00	CARBON MELF	91	5%	1/5W
R578	1-249-428-11	CARBON MELF	8.2K	5%	1/5W
R579	1-249-422-11	CARBON MELF	2.7K	5%	1/5W
R580	1-249-417-11	CARBON MELF	1K	5%	1/5W
R581	1-216-246-00	METAL GLAZE	100K	5%	1/8W
R582	1-249-429-11	CARBON MELF	10K	5%	1/5W

Ref.No.	Part No.	Description			
R583	1-249-431-11	CARBON MELF	15K	5%	1/5W
R585	1-249-436-11	CARBON MELF	39K	5%	1/5W
R586	1-215-493-00	CARBON MELF	1M	5%	1/5W
R591	1-249-426-11	CARBON MELF	5.6K	5%	1/5W
R592	1-249-393-11	CARBON MELF	10	5%	1/5W
R801	1-216-196-00	METAL GLAZE	820	5%	1/8W
R805	1-216-184-00	METAL GLAZE	270	5%	1/8W
R901	1-249-411-11	CARBON	330	5%	1/4W
R902	1-249-411-11	CARBON	330	5%	1/4W
RV101	1-237-830-11	RES, VAR, CARBON 100K/10K/10K (POWER SW/VOL/BAL)			
RV102	1-237-587-11	RES, VAR, SLIDE 100K/100K (BAS/TRE)			
RV501	1-228-994-00	RES, ADJ, CARBON 10K			
RV502	1-228-995-00	RES, ADJ, CARBON 22K			
RV503	1-228-995-00	RES, ADJ, CARBON 22K			
RV504	1-228-995-00	RES, ADJ, CARBON 22K			
RV505	1-226-702-00	RES, ADJ, METAL GLAZE 2.2K			
RY501	1-515-614-11	RELAY			
S901	1-570-953-11	SWITCH, PUSH (1 KEY)(SHUTTER DET)			
S902	1-554-938-11	SWITCH, LEAF (LIMIT)			
SW809	1-554-813-31	SWITCH, KEY BOARD (⏮)			
SW810	1-554-813-31	SWITCH, KEY BOARD (⏭)			
SW812	1-554-813-31	SWITCH, KEY BOARD (◀◀)			
SW813	1-554-813-31	SWITCH, KEY BOARD (▶▶)			
SW814	1-554-813-31	SWITCH, KEY BOARD (⏏)			
SW815	1-570-992-11	SWITCH, KEY BOARD (PLAY/STOP)			
SW817	1-554-813-31	SWITCH, KEY BOARD (DISPLAY)			
SW818	1-554-813-31	SWITCH, KEY BOARD (CLOCK/↳)			
SW819	1-554-813-31	SWITCH, KEY BOARD (RESET)			
T501	1-447-967-11	TRANSFORMER, DC-DC CONVERTER			
TH501	1-807-776-11	THERMISTOR ERT-D2FHJ802T			
TH502	1-807-776-11	THERMISTOR ERT-D2FHJ802T			
TH503	1-807-776-11	THERMISTOR ERT-D2FHJ802T			
X501	1-567-820-11	VIBRATOR, CRYSTAL (16.9344MHz)			
X502	1-567-821-11	VIBRATOR, CRYSTAL (4.194304MHz)			

ACCESSORY & PACKING MATERIAL

1-559-470-11	CORD (WITH CONNECTOR)
2-117-234-01	ADAPTER, DISC
3-310-655-01	SUPPORT (ND), FITTING
3-315-736-21	BRACKET, NEW D
3-323-208-01	BUSHING, RUBBER
3-323-209-01	BOLT (4-5), STUD
3-323-210-01	ADJUSTOR, STUD BOLT
3-323-217-01	HOLDER, BUSHING
3-323-219-01	FRAME, FITTING
3-330-992-01	CUSHION
3-335-423-01	SHEET, PROTECTION
3-336-617-01	BAG, PROTECTION
3-339-403-01	SPRING
3-339-416-01	COLLAR
3-339-417-01	COVER
*3-339-460-01	SHAFT, ACCESSORY
*3-345-302-01	INDIVIDUAL CARTON
3-764-862-11	MANUAL, INSTRUCTION (INSTALLATION)
3-769-506-11	MANUAL, INSTRUCTION
X-3320-524-1	SCREW ASSY (A)
X-3322-201-1	SCREW ASSY (50MM), BRACKET

9-952-977-11

Sony Corporation
Audio Group

English
88D0544-1
Printed in Japan
© 1988.4

Published by A/V Engineering Service Dept.